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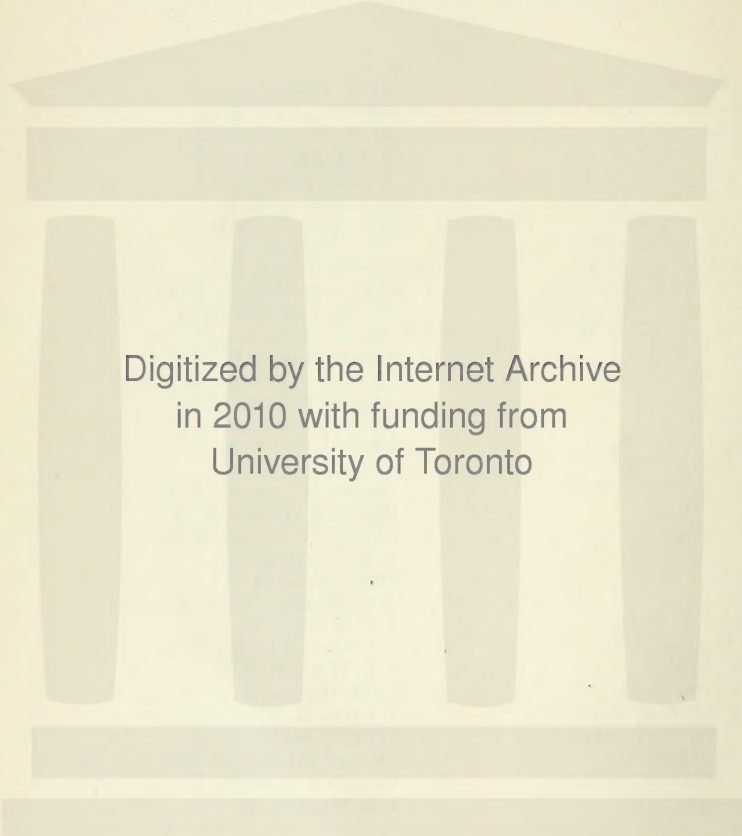
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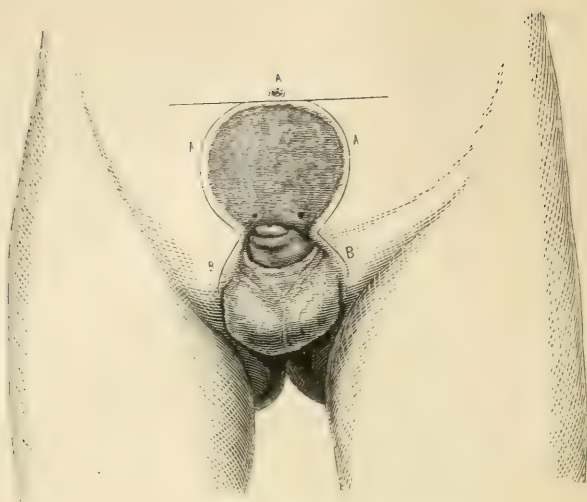


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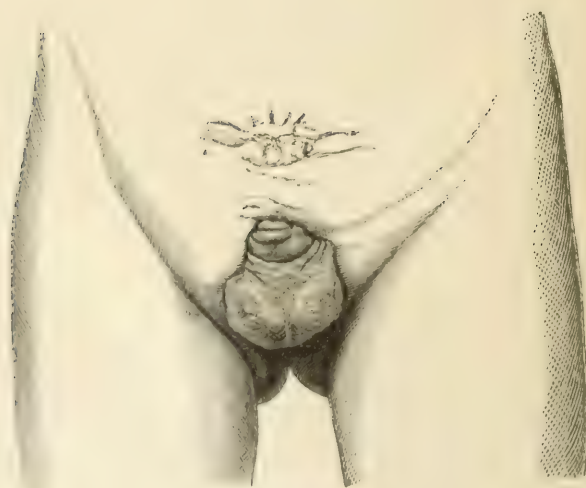


FIG 2

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XCIV. — THURSDAY, JANUARY 6, 1876. — NO. I.

NEW METHODS IN THE TREATMENT OF EXSTROPHY OF THE BLADDER AND OF ERECTILE TUMORS.

BY HENRY J. BIGELOW, M. D.,
Professor of Surgery in Harvard University.

I. EXSTROPHY OF THE BLADDER; OPERATION.

THIS operation consists in removing the exposed mucous membrane of the bladder, so that flaps drawn from the adjacent skin may adhere directly to its raw surface. In the case detailed below, the mucous membrane was removed down to the ureters. Flaps drawn from the sides were then united on the median line. Union was solid in about ten weeks. The usual surgical resource for this sad malformation has been an attempt only to cover the mucous membrane. But it would seem better to obliterate it, by the same operation, than to form a cavity which is worse than useless because it collects the salts of the urine.

The usual operation, of which a case is given below, also needs a more extended dissection. It requires that a first flap be turned down upon the bladder from above, the object of which is to secure a lining of skin for the new cavity. This flap is covered with two others drawn from the sides and united upon the median line. The denuded surface from which the first flap was taken is then similarly closed by further incisions. By the operation now proposed, both the first flap and the dissection for covering the surface which supplies it are unnecessary. In both operations flaps are best cut where the skin is most relaxed. Hence it is better to include in the incisions the loose integuments of the groin and even of the scrotum. The edges can then be brought together in any direction in which the flaps yield most readily.

In a third case cited below, where the bladder (open over the pubes) still presented a cavity, I was able to close this, so that by wearing a truss-pad the patient could retain urine for two hours. This case, however, was not one of complete exstrophy, like the others.

I am indebted to Dr. H. H. A. Beach for the following abstract from the hospital records.

CASE I. *Complete Exstrophy; New Operation.* — E. C. A., six years old, presented a complete exstrophy of the bladder, which was wholly exposed over a surface of two and a half inches; the skin was tense and the abdominal wall thin. The testicles were still in the inguinal canal.

December 13, 1874. Operation, under ether. The mucous surface of the exposed bladder was carefully dissected off, and the lateral flaps, including both inguinal regions, were united upon the median line and transversely above it. Sixteen silver sutures were introduced, and a piece of adhesive plaster was placed over the whole, to keep the parts immovable.

December 14th and 15th. Patient doing well, with little pain.

December 16th. A good deal of swelling about the wound, with a small slough near its upper extremity, where urine oozes.

December 18th. Pulse 140. Temperature, A. M., 101°; P. M., 103°.

December 21st. Twelve sutures removed.

December 22d. Remaining sutures removed.

December 25th. Patient doing well. The wound is healed, except at its upper extremity, where there is a little discharge.

January 22, 1875. A small abscess is forming under the flap. Patient has had a slight convulsion.

January 25th. Abscess discharged through one of the needle-holes.

January 26th. Edges separated a little by ulceration at the upper extremity.

March 1st. Patient is running about.

March 12th. Photograph was taken.

April 10th. Union solid and no tenderness remaining.

May 7th. Discharged, well.

CASE II. *Complete Exstrophy; Old Operation.* — C. P., aged seventeen, entered the hospital with complete exstrophy. Above the symphysis was a pulpy, vascular, and florid swelling, two and a half inches in diameter, formed by the protruded mucous surface of the posterior wall of the bladder. The umbilicus was wanting; no hernia existed, and the testicles had descended. The surface was very sensitive and tender, the penis rudimentary, with a complete epispadias. The urine, distilled from the ureters, fell upon the urethra, which served imperfectly as a spout. The patient was anxious and suffering. A plate covering the part caused excoriation.

June 2, 1868. Operation, under ether. A transverse incision midway between the bladder and the sternum, with vertical incisions at its extremities, surrounded three sides of a flap, of which the hinge was next the bladder. The flap was turned down over the bladder as far as the penis. Additional transverse incisions were now made, and four side flaps were dissected up, two of them abreast of the bladder, and two on a

level with the wound from which the first flap was taken. These four flaps were now drawn to the median line and united, two serving to cover the raw surface of the inverted flap, and two that of the region from which it was taken. The wound was everywhere closely united by silver sutures.

June 3d. Patient quite comfortable, sleeping in a sitting posture to encourage the escape of urine. Flaxseed tea and milk *ad libitum*.

June 7th. Doing well. Appetite good. Takes an opiate at night. The parts in the neighborhood of the wound are carefully washed night and morning, the salts of the urine removed, and the skin protected by castor-oil.

June 11th. Half the silver sutures removed.

June 16th. Patient sits up nearly the whole day, and has an excellent appetite. Flaps are united beneath, while the edges are looking well, though but little united by first intention.

June 18th. Sutures all removed. Patient says that he is much more comfortable than before the operation. The most troublesome feature of the case is the deposition of salts upon the scrotum.

June 26th. Margins pretty well united. All the urine escapes just over the glans penis.

July 7th. Doing finely. Walks about.

August 20th. Cicatrization complete. Bladder wholly covered. His condition is far more comfortable than before the operation. Discharged.

CASE III. *Orifice above the Pubes ; Operation.* — F. W., aged sixteen, presented just above the symphysis pubis an orifice almost an inch in diameter, circular, and in part occupied by a rudimentary glans penis. There were no herniæ, and both testicles had descended. In the erect posture the urine constantly dribbled away. When the patient was lying down the urine collected in the bladder until it overflowed.

November 7th. Operation, under ether. The edges of the aperture and frænum were refreshed, dissected up, and joined with six silver sutures; the orifice was reduced so as to embrace tightly a piece of elastic catheter passed into the bladder.

November 11th. Wound suppurating a little. Glans penis at times enlarged, and trying to escape through the small orifice left from the operation.

November 12th. Catheter no longer worn. Union perfect. Urine escapes wholly through the small aperture.

December 30th. Patient has a sharp attack of epididymitis.

January 2d. Improving.

March. Patient discharged, well. Retains urine for two hours by means of an apparatus consisting of a truss-spring around the pelvis, to which is attached behind a steel spring, passing between the legs and terminating in a pad which compresses the aperture in front.

II. ERECTILE TUMORS OBLITERATED BY CENTRAL CAUTERIZATION WITH A SATURATED SOLUTION OF NITRATE OF SILVER.

In each of the following cases erectile tumors of a formidable nature were easily obliterated by the injection, with a subcutaneous syringe, of a few drops of a solution (equal parts by weight) of nitrate of silver in water. If the tissues are firmly compressed about the orifice of the tube, after its introduction, an eschar of the solid tissues is produced, soon enveloped by coagulum adherent from inflammation, with general blood-stasis in the neighborhood. While the eschar thus made is more distinct and firm than that of acid or of the perchloride, the expression of the blood probably diminishes the danger of embolism. The ultimate result is abscess and solid cicatrization. The first of the following cases was one of a large and pendulous under lip, which was so solidified by a number of simultaneous injections that a V-shaped portion was finally removed from it. The second was one of cirroid aneurism in the cavity of the orbit, which could not have been treated effectually by ligature without sacrificing the eye.

CASE I. Pulsating Nævus of the Lips and Face; Operation; Cure.—A. E., female, aged thirty-six, had a congenital nævus, involving the whole of the chin and lower lip and the inside of the upper lip, with a claret-colored stain extending over both cheeks as far as the ears. The lower lip and the chin were largely hypertrophied and pendulous, pulsating when compressed.

November 24, 1868. Operation. The patient was etherized, and the inside of the whole upper lip strangulated by seven large needles carrying fourteen ligatures.

January 10, 1869. Wound of upper lip entirely healed and tissues contracted.

February 23d. Operation. The patient having been etherized, a few drops of a saturated solution of nitrate of silver were injected by a subcutaneous syringe at eight several places in the thickness of the lower lip, the latter having been compressed upon the point of the syringe during the injection.

February 24th. The patient complains of pain extending down both sides of the neck. Lip much swollen.

February 28th. Little pain; free discharge from the openings; lip swollen and hard.

March 5th. Several small sloughs have come away, leaving cavities beneath the skin. From this time the lip contracted, puckering at the injected points until the whole was solidified.

April 6th. Operation. The patient having been etherized, a V-shaped piece was excised from the centre of the lip, with very little hæmorrhage, except from the coronary arteries.

May 2d. Patient was discharged with a lip of nearly normal size.

CASE II. *Cirsoid Aneurism of the Orbit; Operation; Cure.* — H. McC., housemaid, aged twenty-five, noticed in 1868 a small pulsating swelling at the inner angle of the left orbit. Now, a pulsating tumor of the size of a large almond extends from the supra-orbital notch to the bridge of the nose, and backward between the globe and the orbit. It has increased rapidly of late, and the mass has a tortuous feel like that of enlarged and convoluted arteries. Pulsation is strong and heavy, with a thrill, diminished but not arrested by compression at various points of its circumference. Compression of the carotid does not materially affect the pulsation.

October 17, 1874. Operation. Three drops of a saturated solution of nitrate of silver were injected into the centre of the tumor by a subcutaneous syringe. Before the injection the tumor was firmly compressed against the bone over the orifice of the syringe and held there for a minute or two afterwards. A marked venous congestion was immediately noticed in the vicinity of the tumor. P. M. The swelling has extended to the frontal region; eyelid congested.

October 18th. Tumor perfectly hard, without pulsation. Left eye closed by the swelling of the lids. The latter were scarified. Some frontal headache.

October 23d. Lids opening. General swelling diminished, red but less tender.

October 29th. Swelling larger and fluctuating. Eye again closing.

October 30th. Gland in front of right ear and one under left jaw swollen and tender. Pulse 100. Temperature 99.5°.

November 4th. Temperature normal. The site of the tumor is occupied by a large and fluctuating swelling. Glycerine plasma was applied over the tumor to soften the cuticle where the pus seemed to be pointing.

November 5th. The abscess was spontaneously evacuated near the inner canthus.

November 12th. The patient was discharged at her own request.

December 12th. The patient returned for examination. The place filled by the tumor was now occupied by a firm cicatrix everywhere adherent to the bone.

EXPLANATION OF FIGURES.

Fig. 1. — Exstrophy of the bladder. Lines of the incisions. In uniting them over the dissected surface of the bladder, the points A A A were brought together, and the points B B; the skin more readily yielding in a direction obliquely upward.

Fig. 2. — Photograph of the wound after healing.

A CASE OF ENCEPHALOID CANCER OF THE LUNGS.

BY GEORGE W. GAY, M. D.,

Surgeon to the Boston City Hospital.

DR. C., aged fifty-seven, an active, robust man weighing a hundred and seventy-five pounds, began to notice toward the close of 1874 an increase in the frequency of his respirations, and a slight falling off in his strength. In January, 1875, he took cold and had a severe cough attended with considerable dyspnœa, which lasted several weeks. He kept about his business, and the cough got somewhat better; but the dyspnœa never subsided. All through the spring and early summer he felt that he was carrying a load on the right side in the region of the liver, which prevented free respiration. He took a fresh cold early in July, and on the 10th of that month was seized at eight o'clock in the evening with a most severe dyspnœa and pain in the right side. The attack was accompanied with a violent cough. It was spasmodic, persistent, and not attended with any expectoration whatever. The site of the pain and distress was a space about two inches in diameter, situated on the nipple-line, just below the ribs on the right side. It was tender and tympanitic, and offered some resistance to pressure, yet no distinct tumor could be felt. The severest part of the attack lasted six hours, when he became easier, but slept little if any.

These symptoms recurred every night for a week or more, and were partially relieved by small doses of chloral and opium. The patient was confined to the house two or three weeks; he gradually improved, however, so that he went out-of-doors and saw a limited number of patients. But the dyspnœa, cough, and weakness never left him.

September 5th. He was examined by Dr. Ellis and myself. There was marked dullness over the lower lobe of the left lung. Subcrepitant and finer râles were abundant in this region. Both of these signs were very marked below a line on a level with the lower angle of the scapula, and both gradually shaded off toward the apex. The respiration was indistinct in the left lung compared with the right. There was no increased resonance of voice. He had lost about twenty pounds of flesh, and was pretty weak. Pulse 80, regular. The disease was thought to be chronic catarrhal pneumonia.

October 16th. Pulse 92. Temperature 99.8°. Respiration 26, labored. Dyspnœa and cough no better. Dullness, almost flatness, all over the left chest, except just below the clavicle, where, over a small space, there was a peculiar tympanitic resonance. Bronchial respiration over the back, and broncho-vesicular respiration over the upper left front. No râles. Marked resonance of voice over the whole of the left side. Vocal fremitus was entirely wanting on this side, though it was very distinct on the right. At the base of the right lung there

were a few subcrepitant râles. There was no fullness of the intercostal spaces, nor dislocation of the heart.

The entire absence of vocal thrill and râles, and the indistinct respiration, led to the conclusion that effusion had taken place in the left pleural cavity. Dr. Ellis punctured the chest with the aspirator, and drew off between two and three pints of dark, yellow fluid. Considerable relief followed. The respiration returned nearly to the bottom of the lung behind, where it had been nearly or quite wanting, previous to the tapping. There was also a decided increase of respiration in the upper part of the lung. The dullness was much diminished, and the voice became less resonant.

In a few days the condition was as bad as ever. Dr. Bowditch was called in consultation October 22d, and made the following notes: "Tympanites in upper half of left chest, front. Flatness elsewhere. Strong ægophony in lower left back, with bronchial respiration. No râles. Heart at the right of the sternum. Puerile and pure respiration, good resonance throughout the right lung." He advised a repetition of the paracentesis, and performed the operation. Forty-six ounces of a sanguinolent fluid were drawn from the left chest. For several hours after the operation the patient suffered from the most excruciating stitch-pains, but was finally relieved by a free use of opiates. He remained somewhat more comfortable for a few days, but the cough and dyspnœa were very severe and constant.

The first week in November all of the symptoms were worse, and there was progressive diminution of strength and flesh. The dyspnœa was so severe that the patient could not lie down. His skin was greatly congested, and his lower extremities œdematous. There was bulging of the left intercostal spaces. The heart was displaced to the right of the sternum, and there was a slight friction-sound as of commencing pericarditis. He was tapped again by Dr. Bowditch, and forty-seven ounces of the same kind of fluid as at the last operation were obtained. The chest was not as thoroughly emptied, and the resulting stitch-pains were not as severe, nor was there quite as much relief from the dyspnœa, as before.

November 15th. Physical signs in the left chest were as before: flatness, absence of vocal fremitus, and respiratory sounds.

Dr. Bowditch again introduced the trocar, but did not obtain any fluid. The puncture was made in the same region as on the previous occasions, — at about the seventh intercostal space. It was supposed that the instrument had penetrated a mass of malignant disease, or the lung crowded against the walls of the chest.

From this time until his death, on the 20th of November, the patient's sufferings from dyspnœa were most intense, in spite of large and continued doses of opium and the free inhalation of chloroform. He retained his consciousness to the last, and finally died of exhaustion.

The autopsy was made twelve hours after death, in the presence of Drs. Bowditch, Buckingham, Ellis, Webb, and McCollom.

Rigor mortis was well marked; the body not greatly emaciated. The color was normal; there had not been any cachectic appearance during life.

About three quarts of fluid were found in left pleural cavity. It was at first light-colored, but became dark at the bottom of the chest. The left lung was contracted and crowded upwards, so that its lower edge came opposite the nipple. It was very firmly adherent at the top, and part way down the back and sides. The lower portion was crowded against the thoracic walls by the fluid, thereby explaining the failure to obtain fluid at the last tapping. The lung was hard, contracted, slightly compressible, and, with the whole pleural surface, closely infiltrated with encephaloid cancer. A section of the lung looked not unlike miliary tubercle, and this form of disease has been called miliary cancer.

The following is Dr. Fitz's report of the appearances of the organs:

"The left lung more particularly, the right one to some extent also, contained numerous nodules and granules varying in size from that of the head of a small pin to that of apricots. With the exception of the smallest ones their borders were not circumscribed, but they assumed rather the appearance of a diffuse infiltration of a grayish color, and were of a soft-solid consistency. On pressure there exuded drops of opaque, gray fluid, which readily became confluent. These drops consisted almost wholly of large, flat, finely granular cells, of exceedingly irregular shapes. Their nuclei were large, and presented the indentations and septa indicative of proliferation.

"From the smallest bronchial tubes yellow drops could be squeezed, which were mainly composed of similar cells in a state of fatty degeneration.

"The left pleura more particularly was thickened, reddened, and dotted with slightly elevated patches and granules varying in color from gray through white to yellow. In the subpleural fat-tissue, similar granules were observed, often as beaded lines; and the subpleural lymphatics of the lung were injected with a yellow material. The bronchial glands were enlarged, soft and gray, exuding white drops on pressure.

"The nodules in the kidney were firmer, but possessed a similar structure to that of the pleural nodules, and, so far as the cells were concerned, to those of the diseased portions of the lungs. The cells were arranged in an alveolar manner.

"When portions of the infiltrated lung-tissue were shaken in a bottle containing water, the elastic fibres of the affected portion of the lung presented a normal arrangement, and the cells referred to were occasionally found as clumps representing casts of the alveoli.

“The tumor thus presented the characteristics of a medullary cancer.”

The right pleural cavity contained between one and two pints of clear serum. The lung was somewhat adherent at the apex, but not as much shrunken and contracted as was the left. The pericardium contained three or four ounces of thin, deep red fluid; but there were no patches of lymph, nor adhesions, nor redness on its inner surface. The heart was slightly enlarged. Its valves and walls were normal. In each kidney was found a small nodule of whitish substance, the size of a pea, of the same nature as the growth in the lungs, but secondary to it. The liver was somewhat enlarged. Its substance was apparently healthy, as was its capsule. The gall-bladder was filled with a very dark fluid, but did not contain calculi. The stomach and spleen were normal. A few glands behind the duodenum were enlarged, and infiltrated with what appeared to be the cancerous material.

Remarks.—Primary cancer of the lungs is so very rare, and the symptoms so obscure, that the above case is of peculiar interest. At the first examination the diagnosis was thought to be plain. Dullness, and subcrepitant and finer râles at the base, with a gradual loss of flesh and strength, naturally led to the diagnosis of chronic catarrhal pneumonia. But at the second examination, six weeks later, although the dullness had greatly increased, the râles were gone, and the respiration at the base was nearly so. Moreover, vocal fremitus was absent. There was evidently effusion. But effusion supervening upon catarrhal pneumonia is very uncommon. This peculiarity in the symptoms, coupled with the fact that the patient experienced much less relief from emptying the pleural cavity than is usually obtained in ordinary cases of effusion, led us to think that we had to deal with some unusual affection of the lungs. That this affection was probably malignant was the unanimous opinion of all the physicians who saw or attended the patient.

Another peculiar feature of the case was the pain. For thirty years and more, Dr. C. had invariably suffered pain after eating, at a point just below the ribs, on the right side, about two inches from the median line. This region was frequently tender and distended. During his last illness all of the pain and discomfort, except the stitch-pains felt after tapping, were situated in this spot or radiated from it. He had no pain whatever, with the above exception, in his left chest, the principal seat of the cancerous affection. As the autopsy revealed nothing to account for the abdominal pain which troubled him so many years, it would probably be called neuralgia.

Again, there was neither hæmoptysis nor expectoration during the whole sickness. All the authorities which I have been able to consult mention both of these as being very common symptoms in this affection. Neither did the patient have the general appearance or many of the symptoms of tubercular disease. There was no hectic, or great emacia-

tion, or disturbance of the stomach and bowels, or sleep-sweats. Primary cancer of the lung, which, according to Niemeyer and other authorities, is an exceedingly rare affection, usually assumes the form of medullary disease; it is hardly ever scirrhus. It occurs in the form either of isolated masses or of infiltration. It seldom breaks down and forms cavities, but is more liable to extend to the pleura, and even through the walls of the chest.

The most prominent symptom in all the cases we have been able to find was dyspnœa. Cough with expectoration and blood-spitting were also present in the majority of cases. These symptoms coming on in a person suffering from a cancer in some external organ would point strongly to malignant disease in the lungs or thoracic cavity; for it is very rare to find tubercular disease in a cancerous patient. But in the case of a patient not known to be affected with cancer the symptoms might be, and often are, very obscure. Cases of primary cancer of the lungs are not unfrequently mistaken for pleurisy, or phthisis, or capillary bronchitis.

The following case is reported in *The Lancet* of April 3, 1869: A girl eleven years of age had severe dyspnœa. There was dullness throughout the left chest. The respiration was inaudible except under the clavicle and close to the spine. Vocal fremitus was present in these two places, but nowhere else. The heart was displaced to the right side, and there was bulging of the intercostal spaces. The diagnosis was effusion into the left chest. She was tapped twice between the eighth and the ninth rib, but only a few drops of blood and pus came from the trocar. At the autopsy a large mass of medullary cancer was found in the left chest. The lung was pushed back and spread out over the tumor. This case shows the great difficulty or even impossibility of making a diagnosis in some of the malignant affections of the thoracic cavity.

Pleuritic effusion is not as common in these cases as one would at first suppose. Dr. Risdon Bennett¹ says it was present in only six cases out of thirty-nine. I found it reported as being present in three out of seven cases. Occasionally the question of effusion in these cases can be easily decided by finding the dullness at the upper part of the chest, and by the fact that it does not change its place with the different positions of the body. But the surest method to determine the presence of fluid is by aspiration. There is seldom anything in the expectoration to aid in the diagnosis of thoracic cancers. The so-called characteristic "black currant expectoration" is exceedingly rare.

Aside from pleurisy, the disease most liable to be mistaken for cancer of the lung is probably tuberculosis. In the former we should not expect to find the high pulse and temperature, pallor and emaciation, and profuse sweats, so characteristic of the latter affection.

¹ *The Lancet*, 1870.

I desire to say in conclusion that the patient in this case received the kindest attentions from Drs. Bowditch, Ellis, Buckingham, Cotting, Storer, and McCollom.

RECENT PROGRESS IN MEDICAL CHEMISTRY.

BY EDWARD S. WOOD, M. D.

URINARY CHEMISTRY.

Alkapton in the Urine. — The second case of the finding of this substance in the urine is reported by P. Fürbringer.¹ The first case was reported by Boedeker,² alkapton having been found together with grape sugar in the urine of a patient forty-four years old. In this case, it was found in the urine of a gold worker, twenty-nine years old, who was suffering with disease of both the lungs and of the liver.

Alkapton is a substance which has a powerful attraction for oxygen, and reacts chemically in many respects like grape sugar, and therefore may in rare instances be mistaken for it, unless the proper means be employed to distinguish between them.

The urine, the specific gravity of which varied from 1010 to 1025, was remarkable for its dark color (between numbers seven and eight of Vogel's color table), and for the small amount eliminated during the twenty-four hours, the average amount being about six hundred cubic centimetres (minimum = three hundred cubic centimetres; maximum = eight hundred cubic centimetres). This condition had lasted but a few weeks previous to his admission to the hospital, and did not seem to be at all dependent directly upon the lung or the liver disease. The urine had a pretty strong acid reaction, no special odor, and no abnormal sediment, except occasionally one consisting of amorphous urates. At times a trace of albumen could be detected, but usually none was present. The excess of color was due to a very large proportion of urophæin, and to no abnormal pigment.

The urine was tested for sugar by Trommer's test (liquor potassii and sulphate of copper), and an abundant precipitate of the suboxide of copper was obtained, a result which was entirely unexpected. It was also noticed that immediately upon the addition of the liquor potassii a very dark brown color was produced, which is not one of the reactions of sugar, but is of alkapton. When alkapton is treated with an alkali, the solution absorbs oxygen very rapidly, in varying proportions according to the amount of alkapton present. When this urine was rendered alkaline and shaken with air, it absorbed about four fifths of its volume of oxygen. In Boedeker's case the urine similarly treated

¹ Fresenius' Zeitschrift, 1875, page 408; from Berliner klinische Wochenschrift, 1875, No. 24.

² Annalen der Chemie und Pharmacie, cxvii. 98.

absorbed somewhat more than an equal volume of oxygen. It is, of course, upon this property of alkapton that its reaction with Trommer's test depends. It is impossible to detect sugar by this test, unless the urine be first freed from alkapton by precipitating it with the basic acetate of lead (which throws down the alkapton and leaves the grape sugar in solution) and filtering.

Moore's or Heller's test (heating the urine with liquor potassii alone), which is, perhaps, the most frequently employed test for sugar in the urine, will not serve to detect sugar in the presence of alkapton, on account of the dark brown color produced by the latter. There are, however, two common tests for grape sugar which are not interfered with by the presence of alkapton, namely, Boettger's and the fermentation test, since the latter substance does not reduce the subnitrate of bismuth to the form of metallic bismuth, nor does it give rise to the production of carbonic acid and alcohol when mixed with yeast, as does grape sugar.

Mulder's test for sugar reacts only partially with alkapton. When a dilute solution of indigo carmin is mixed with an equal volume of liquor potassii, then a little of the urine is added, and the whole heated, the play of colors, through a blue, green, violet, and red to a reddish brown, is produced both with alkapton and with sugar; but upon shaking again with air, the reverse takes place only when sugar alone is present, alkapton preventing the reoxidation.

The importance of being able to detect this substance in the urine depends upon the liability of diagnosing diabetes mellitus when no sugar exists in the urine, since nothing as yet is known concerning the method of the formation of alkapton in the body. In the case reported no alkapton could be detected after death in the fluids of the body.

Determination of Uric Acid in the Urine. — The method usually employed for estimating uric acid in the urine, namely, precipitation by hydrochloric acid, has many disadvantages, the principal one of which is that there are certain substances present in many specimens of urine which apparently hold the uric acid in solution. A new method is given by A. P. Fokker,¹ which depends upon the insolubility of the acid urate of ammonium in alkaline solutions, and which gives excellent results.

The method is as follows. One hundred cubic centimetres of urine are treated with a solution of the carbonate of sodium until the reaction is strongly alkaline, and filtered from the precipitated earthy phosphates. To the filtrate is added ten cubic centimetres of a solution of chloride of ammonium, and the whole is allowed to stand for several hours, when all of the uric acid will be precipitated in the form of urate of ammonium, which for the most part collects at the bottom of the vessel,

¹ *Frankenian's Zeitschrift*, 1875, page 206; from *Pflüger's Archiv*, x. 153.

a little usually adhering to the side. Then filter and collect this precipitate on a small, previously weighed filter. The next step is to decompose this with hydrochloric acid, in order to set the uric acid free. To accomplish this, the funnel with the filter in it is passed through a hole in the stopper of a common bottle, and the stopper is then tightly inserted so as to prevent the escape of any air from within the bottle. The filter is next filled with strong hydrochloric acid, and allowed to remain until the precipitate is decomposed and the uric acid formed. Then when the stopper is loosened, the hydrochloric acid will escape, leaving the uric acid upon the weighed filter. It should be washed till no more acid is left, then dried and weighed. Since a minute amount of the urate of ammonium remains dissolved in the urine, it is necessary to add sixteen milligrammes to the amount of uric acid found in each one hundred cubic centimetres of urine analyzed.

One great advantage of this method over the ordinary one is that it is not necessary to free the urine from albumen, since this substance is not precipitated from alkaline solutions, and therefore does not interfere with the result. In this way a much larger amount of uric acid is always obtained from the urine.

This method can also be used as a clinical test for the approximate estimation of uric acid to much better advantage than Heller's test, which consists in adding to the urine in a test-tube one eighth of its bulk of hydrochloric acid, and allowing it to stand for twenty-four hours. The amount of uric acid present is then judged of approximately by the amount of crystalline sediment seen at the bottom of the test-tube. In many specimens treated in this manner no crystals form when uric acid undoubtedly exists in considerable amount.

Action of Uric Acid on Fehling's Solution. — Professor J. Seegen¹ has tested this action in the cold. As is well known, both grape sugar and uric acid produce a precipitate of the suboxide of copper when their alkaline solutions are boiled with a few drops of a solution of sulphate of copper, but only sugar produces this result in the cold. Very dilute solutions of sugar in urine will not, however, produce any precipitation of the suboxide of copper, since certain ingredients of the urine will hold in solution small amounts of this substance. Thus, Seegen found that urine which contained only one tenth per cent. of sugar decolorized Fehling's solution, but did not produce any precipitate, and he also found that pure solutions of uric acid containing one half per cent. (a larger amount than urine ever contains) act in the same way. Uric acid, therefore, when present in considerable amount in urine does have some effect upon copper solutions in the cold, and we must not conclude that sugar is necessarily present in the urine, even though Fehling's solution is partially decolorized at the ordinary temperature, if no precipitate of the suboxide of copper is produced.

¹ *Centralblatt für die medicinischen Wissenschaften*, 1875, No. 21.

Dextrine in Urine.—E. Reichardt¹ has repeatedly observed that the urine of diabetics after the disappearance of the sugar does not lose its power of reducing Fehling's solution, although this power is much diminished. This is due to the presence of a certain amount of dextrine in the urine. He isolated the dextrine in a pure form, and was able to recognize it by all of its reactions and to make an ultimate analysis of it, its composition corresponding to that of dextrine.

Prostatic Concretions.—In an article upon the normal anatomy of the prostate, by Axel Iverson,² the author speaks of the formation and chemical composition of the prostatic concretions and calculi. By a microscopic examination of the fresh secretion were seen masses of cylindrical epithelial cells containing single yellowish kernels which had a strong refracting power. These kernels were also seen free in the fluid and clumped together in small masses. They were found wanting in the secretion of children, being first seen after the seventh year, and their number increasing with the age of the individual. They were insoluble in potassic hydrate, acetic acid, and ether. Iodine colored them yellow or brownish yellow, never blue. They were not colored by Millon's reagent.

The true concretions were never found before the twentieth year. These consisted of layers of material composed chiefly of inorganic phosphates deposited around nuclei of these yellowish kernels, or small masses of organic detritus. They grow darker with the age of the individual, after the forty-fifth year being usually reddish or even dark brown. Many of them are colored blue by iodine, the number which are so acted upon seeming also to depend upon the age of the individual, nearly all of those which were found in persons between twenty and thirty-five years of age, and scarcely any of those found after the age of sixty, being colored blue by iodine. They were mostly dissolved by hydrochloric, nitric, and acetic acids. No single concretion was found larger than the head of an ordinary pin, the large prostatic calculi frequently seen consisting of aggregations of these small concretions held together by mucus.

An analysis of about two grammes of these concretions gave the following composition:—

Water	8.00
Organic matter	15.80
Lime	37.64
Magnesia	2.38
Soda	1.76
Potash	0.50
Phosphoric acid	33.77
Substance insoluble in acids	0.15

¹ Fresenius' Zeitschrift, 1875, page 417; from Pharmaceutische Zeitschrift für Russland, xiv. 45.

² Maly's Jahresbericht, 1875, page 358; from Nordiskt Medicinskt Arkiv, vi. 20.

They therefore consisted chiefly of calcic phosphate, containing no sulphur, sulphuric acid, chlorine, or carbonic acid. They did contain a trace of iron. No reaction for albumen could be obtained from the organic matter, which contained about thirteen per cent. of nitrogen.

(*To be concluded.*)

PROCEEDINGS OF THE NORFOLK DISTRICT MEDICAL SOCIETY.

A. H. NICHOLS, M. D., SECRETARY.

THE quarterly meeting of the society was held at the Willard House, Hyde Park, July 14, 1875, the President, DR. S. E. STONE, in the chair. Present, twenty-eight members.

DR. HAMMOND reported a case of puerperal convulsions, occurring in a young woman who was the subject of extensive œdema of the face, neck, upper and lower extremities, and external genital organs. There was no previous history of epilepsy and no reason to suspect the existence of hysteria. She was supposed to be in the beginning of the ninth month of pregnancy.

The treatment consisted in the free and continued use of chloral combined with morphia, in moderate venesection, and in powerful catharsis. Labor set in, resulting favorably to both mother and child. Dr. Hammond was of the opinion that the absence of convulsions during the process of labor was due, in no small degree, to the powerful revulsive action of croton-oil, employed as a cathartic immediately before labor set in.

DR. MAYNARD was disposed to regard the action of any drug as extremely uncertain, so far as concerns the controlling of convulsions.

DR. SALISBURY stated that in the early part of his medical life the common remedy employed in case of puerperal convulsions was venesection. From his personal experience in this disease, he was not disposed to advocate the artificial induction of labor.

DR. CHASE gave the particulars of a case of puerperal convulsions in which he resorted to artificial dilatation of the os and the application of the forceps, both woman and child being saved. The convulsions returning were relieved by the use of chloral.

DR. CAMPBELL read a paper upon puerperal fever, in which he maintained that the most frequent cause of this affection is septic poisoning, which is especially liable to supervene in the puerperal state, owing to the circumstance that the uterus presents at that time a large wounded surface, exposed throughout to the action of decomposing putrid fluids. Cases were cited to illustrate that the prominent symptoms of puerperal fever were such as are peculiar to septicæmia.

DR. BOLLES, in criticising the paper, thought the reader had not been sufficiently discriminating in his explanation of the causes of puerperal fever, in that he had omitted some of the most important causes; he had failed, moreover, to allude to certain coincidences worthy of mention, in which numerous cases of this disease follow in the wake of a single practitioner.

DR. CAMPBELL said, in reply, that he was quite ready to admit that the infecting material might come either from within or from without the patient.

DR. GOSS read a paper upon German measles (rötheln) and its relations to other exanthematous diseases.

DR. GERRY read a paper upon rheumatic meningitis.

DR. BACON reported a case of exanthematous disease in which the eruption assumed an anomalous appearance. The case at the outset seemed to be one of varioloid, the eruption on the first day being papular, on the second vesicular, and on the third pustular. A week later the crusts had fallen off, but were immediately succeeded by a fresh crop of pustules.

DR. PERRY related the particulars of three cases which had been diagnosed by another physician as German measles, where he was satisfied that the eruption was due to indigestion (ingesta rash of Wilson).

DR. BOLLES exhibited the following specimens:—

(1.) Renal calculi from three different patients, neither of whom exhibited any symptoms indicative of the presence of the calculi.

(2.) Biliary calculi resembling beet-seed.

(3.) A tape-worm, of the variety known as medio-cannellata.

The regular quarterly meeting of the society was held on November 10th, at the Willard House, the President, DR. S. E. STONE, in the chair.

DR. C. C. HAYES read a paper upon the Pathology and Treatment of Placenta Prævia, the previously announced subject for consideration.

In the general discussion which followed, DR. FIFIELD favored the treatment of certain varieties of placenta prævia in accordance with the principles inculcated in 1844 by Professor Simpson. This method consists in carefully peeling off and removing the placenta, which commonly results in an immediate arrest of the hæmorrhage, and a favorable termination of labor without further interference. Dr. Fifield maintained that this forcible detachment of the placenta was followed by an occlusion of the bleeding vessels, and thus proved a direct method of stopping the flowing, while the process was attended in many cases with less danger to the mother than that of artificial extraction of the child. If the hæmorrhage did not cease after the operation, he should attribute it to the imperfect detachment of the placenta. It is to be understood that this method was recommended by Professor Simpson, not as a general rule of practice, but as a procedure to be had recourse to only when other recognized modes of management prove insufficient or unsafe; when, for instance, the hæmorrhage is not restrained by the artificial evacuation of the liquor amnii; when turning is hazardous or impracticable; or when the child is dead or non-viable.

DR. CAMPBELL thought that the mode of treating placenta prævia by detaching the placenta was open to this serious objection, namely, that it involved the death of the child, an inevitable result of the non-aeration of the blood, and not of the hæmorrhage, as has been incorrectly supposed.

DR. TRULL also differed from Dr. Fifield, on the ground that the life of the child would generally be sacrificed if the placenta was first brought down. He related two cases occurring in his practice, both being primiparous, in which

the os being open to the size of half a crown, the fingers were slowly introduced seriatim, dilatation accomplished, membranes punctured, and the feet brought down. Turning was not difficult, and hæmorrhage almost immediately ceased. Delivery was in one case delayed by the absence of pains, until the child was asphyxiated beyond the power of restoratives. In the other case, the child survived. Both women made good recoveries, although extremely prostrated from loss of blood, no radial pulse being perceptible in one at the time of operation. Dr. Trull regarded version, in the great majority of cases, as the safest and most desirable method of treatment, demanding only persistence in the exercise of gentle force while introducing the hand.

DR. WINKLER said he had treated two cases of placenta prævia, both mother and child being saved in each instance. The course pursued by him was to forcibly dilate the os, employing for the purpose Barnes's dilator; then, rupturing the membranes, to leave the case to a natural termination.

DR. C. E. WING said that it might be interesting to the members to hear what method is pursued in Vienna in the treatment of placenta prævia, which is as follows:—

If the os is open enough to permit version by the feet, this operation is at once performed.

If the os be not sufficiently open, and the hæmorrhage continues, the waters are evacuated, which alone is generally sufficient to stop the bleeding; and as soon as the os dilates, version by the feet is performed.

If after evacuating the waters the bleeding continues, or the os is particularly slow in dilating, the vagina is tamponed with the colpeurynter (a rubber bag distended with water).

In Vienna, stress is laid upon the importance of not wasting time in the attempt to find the thinnest edge of the placenta, as the arm when introduced acts as a plug, and the leg of the child takes the place of the arm when the latter is withdrawn.

Instances would of course occur where the above rules might not be applicable. For example, Dr. Wing recalled one case where the head presented at a well-dilated os, and the womb was so contracted that turning was deemed very difficult. Here the child was delivered by the aid of forceps. In another case, an attempt at version failed, and the placenta was then wholly detached, after Simpson's method. When the child was afterwards born (dead), the cord was found so wound about the body that version was thereby rendered absolutely out of the question.

DR. TOWER stated that two instances of placenta prævia had fallen under his observation, one of which was particularly instructive. The patient was thirty-five years old, and when first seen was exsanguine; the pulse was small and weak; the os was high up and extremely rigid, corresponding to the condition described in the text-books as that of "ivory hardness." Dr. Tower proceeded to forcibly dilate the os until it would admit the tips of two fingers, and then inserted a tampon. Upon the following day the parts were found in the same condition, the os being in no way relaxed, and the tampon was accordingly replaced. He had barely reached home before a messenger came to inform him that an alarmingly profuse hæmorrhage had taken place. He at

once hurried to the bedside of the woman and found her dead. At the autopsy it was discovered that the placenta was attached for the most part to the anterior surface of the womb; it covered completely the internal orifice of the os, and reached up a short distance upon the posterior wall. Its diameter was thirteen inches. Dr. Tower said that in another similar case he should not hesitate to resort to incisions of the os.

DR. DEARING remarked that in a similar case reported by Bedford, where the hardness of the os resembled that of ivory, incisions were made in the os.

DR. MONROE insisted upon the importance of not leaving the patient for any length of time in a case of placenta prævia.

DR. ARNOLD said his experience comprehended ten cases of placental presentation, involving all the different varieties. The interesting features of several of these cases were briefly related.

THE TEACHING OF MEDICAL JURISPRUDENCE.

VARIOUS legal trials have of late brought strongly before our mind the necessity of better instruction in medical jurisprudence than is given in any of our schools. In many schools it is not taught at all, and we fear it is thoroughly taught in none, in spite of its great and continually increasing importance. Probably the real reason of the neglect is an uncertainty as to the best method of giving the instruction. The subject may be divided into two chief parts, according as it is considered from a legal or a medical aspect. Of these the latter is infinitely the more important. The physician should know something of his legal obligations to his patients, to what extent he is responsible for results, how far communications may be considered privileged, and what are his rights as a witness. A very little might be said as to the manner of giving evidence, but it need be very little, for if the expert have ability and knowledge, all else that he requires is honesty, coolness, and the courage to maintain his opinion if he is sure he is right, and to acknowledge his ignorance of what he does not know. If the physician has not these qualities, no instruction will give them to him, and we believe that everything essential in the above subjects could be discussed in half a dozen lectures, which might or might not be given by a lawyer.

With the medical aspect of this branch the case stands very differently, and we venture to assert that there is no man living who can give a perfect course, so varied and accurate is the knowledge required, embracing the details of every department of medical science. Yet it is this part of the branch in which instruction is chiefly wanted. It seems to us that the remedy is simple. To appoint a man to teach the latest advances in various sciences, all of which he cannot possibly keep up with, is absurd, but it is very natural to expect each instructor to dwell on the medico-legal aspects of his own branch. Thus, the professor of chemistry should teach the detection of poisons and blood stains; the anatomist, the identification of bones or pieces of bone, the proportions of the body, and the way to determine the height, age, and sex, from parts of it; he should treat of soft parts as well as of bones, and mention the effect of exposure, decomposition, fire, etc. The surgeon has the important

duty of putting the student on his guard against the black-mailing conspiracies to which we are particularly liable in the treatment of fractures and dislocations, and he should also speak of the injuries from gun-shot wounds and blows, especially those on the head. The obstetrician and gynaecologist should decide such questions as the duration of pregnancy, still-birth and living birth, rape, etc., while the appearances caused by suffocation may be treated both by teachers of physiology and those of pathology; general directions for making an examination of a body should be given by the latter. It should be settled by agreement in what branch certain questions may best be discussed, and thus the whole subject will be thoroughly taught. We would not have the instructor set apart certain lectures for medico-legal subjects, but would have these introduced in their proper places throughout the course, which will thereby be more attractive as well as more profitable. At the examinations each professor should ask several medico-legal questions on subjects pertaining to his branch. The days are past, if they ever existed, when all this could be done by one professor, but it is still more absurd to appoint to the professorship a lawyer who can teach none of these things. To make up his course, he must go at length into legal discussions most of which, we say it with the greatest respect, the physician is better without. It cannot be too strongly impressed on the medical witness that he has nothing to do but to tell the truth.

MEDICAL NOTES.

—In *The Lancet* of December 11, 1875, is an article on trichinosis based upon data derived from Germany and from the United States. Dr. Sutton, of Aurora, Indiana, has published an account of a carefully investigated outbreak of the disease which occurred in that town in 1874, in which nine persons were attacked, of whom three died. The symptoms were mainly those of gastro-enteritis; muscular pains were experienced in a minority of the cases. "The resemblance of the symptoms in two of the fatal cases, and in those which were not fatal, to a simple inflammation of the alimentary tract, is a fact of much importance, which was further confirmed by experiments on dogs. Its importance lies in the fact that while trichinosis had no place in the registrar-general's returns in America a few years ago, dysenteric and enteric affections produce a great number of deaths, and Dr. Sutton brings forward facts to show that a considerable proportion of the pigs killed in the Western States are affected with the disease. Microscopic examination of the flesh of several thousand pigs killed in Southeastern Indiana showed that from three to sixteen per cent. were affected with the disease. The Western States are the chief pork-producing districts. It is estimated that in them five million pigs are killed and sent away each winter, their flesh being the chief animal food of a large portion of the population of the United States. If only four per cent. of these pigs are diseased, the number of affected animals annually sent to the American market is upwards of two hundred thousand! If it be true that in ninety per cent. of the cases of trichinosis the chief symptoms are intestinal, trichinosis may have been effecting serious unsuspected ravages for many years."

— Chloride of lead as a deodorizer and disinfectant is highly recommended by R. H. Goolden, M. D., in *The Lancet* of December 11, 1875. To prepare it, take half a drachm of nitrate of lead, dissolve it in a pint or more of boiling water, and dissolve two drachms of common salt (chloride of sodium) in a bucket of water. Pour the two solutions together and allow the sediment to subside. The clear supernatant fluid will be a saturated solution of chloride of lead. A cloth dipped in this solution and hung up in a room will sweeten a fetid atmosphere instantaneously, or the solution thrown down a sink, water-closet, or drain, or over a heap of dung or other refuse, will produce a like result. Even the tarnishing of gold and silver plate may be prevented by a rag dipped in the solution being hung up in the room or window where it is exposed. One great advantage of this deodorizer over all others lies in its great cheapness.

MASSACHUSETTS GENERAL HOSPITAL.

LARYNGOSCOPIC CLINIC.

BY F. I. KNIGHT, M. D.

Pedicated Polyp of the Left Vocal Cord; Hoarseness; Restoration of Voice after Removal of the Growth; Microscopic Examination of the Growth; Lymphangioma? — A. J., a Portuguese sailor, twenty-eight years of age, presented himself at the clinic July 19th, with a pedicated polyp on the anterior part of the left vocal cord, near the angle of union of the cords. It was smooth, whitish in color, and of about the size of a bean. On phonation it was thrown up above the cords, although the pedicle was short. The growth was removed August 6th with Türk's forceps. The voice was at once restored. The polyp was put into a phial of alcohol and water immediately. Unfortunately the cork came out in my pocket, and the specimen became somewhat dried before it was discovered. Dr. Fitz reported the following result of his examination of the growth: "The specimen was not in a sufficiently good condition to enable me to make a satisfactory examination. Its structure was essentially fibrous, with several blood-vessels, arteries, whose walls were of remarkable thickness. The dense sub-epithelial layer of tissue contained numerous brownish-yellow pigment granules in rows, and accumulated in round, spindle, and stellate groups. Actual cysts were not found. Irregular spaces were seen, containing a relatively homogeneous but finely granular material, suggestive of coagulated albumen; in their vicinity patches of fibres were found, the bundles more or less convoluted, such as might be seen in parts more or less exposed to considerable changes in volume. It seems unfortunate that a little more could not have been ascertained, as the gross appearances and properties of the tumor, combined with its histology, would lead me to suspect that the growth might perhaps be regarded as a lymphangioma."

Two Cases of Naso-Pharyngeal Polypi treated by Puncture with a Galvano-Cauter Point; the Growths reduced to almost Nothing in Size, with Entire Relief to Symptoms. — CASE I. J. P. S., aged fifteen, appeared at the clinic in

May, complaining of almost complete obstruction of the nose. On rhinoscopic examination, a round tumor about the size of a walnut was seen, covering both posterior nasal openings and septum. Its attachment could not then be made out. It was grayish-white in color, smooth, and somewhat elastic to compression with the probe. On May 22d several insertions were made into this growth with the smallest galvano-caustic point of Voltolini's instrument (the battery would not heat a larger one), and at the next visit, a few days after, the growth had diminished certainly one third in size, and the left posterior nasal opening had come into view. The repetition of the operation a few times completely relieved the respiration, the tumor being reduced to an insignificant size, and both posterior nares becoming free.

CASE II. Mrs. R., aged sixty-four, a private patient, treated at the clinic for convenience. She had had one nasal polypus removed one year ago, and another five years ago. Her sleep had been very much disturbed for four or five months by nasal obstruction. On examination, July 7th, a large rather reddish growth was seen in the rhinoscopic mirror, completely covering the posterior nasal openings. This was punctured in the same manner with the galvano-caustic point, and immediate shrinkage of the growth and relief to respiration followed. The treatment was continued occasionally for several months, till the growth was hardly larger than a bean.

Both of these growths proved to be attached near the junction of the soft palate and septum, but did not extend into the nostril, and hence were not naso-pharyngeal, strictly speaking, but such growths are usually classed as "naso-pharyngeal." Neither were they purely fibrous, but apparently "fibromucous."¹

BOSTON CITY HOSPITAL.

SURGICAL CLINIC.

BY GEORGE W. GAY, M. D.

Extensive Epithelial Disease of the Face ; Removal ; No Recurrence for Five Years. — Ellen D., a domestic, aged fifty-nine, entered the hospital June 21, 1870. Her disease began as a small wart on the left side of her nose fourteen years ago. It grew slowly till within a year, during which time it had increased rapidly. It was situated upon the left side of her nose and face. It involved the left upper lid, the globe, and all of its contents. The cornea was opaque, and the sight of that eye destroyed. The facial portion was an "up-growth," two inches in diameter, tender and painful. It had bled occasionally during the past three years. The nostril was not obstructed. The patient was troubled a good deal with headaches, apparently due to the disease. With this exception her general health was very good. After consultation it was decided to remove the growth, more to relieve the patient's pain than with the expectation of ridding her of the disease for any length of time.

¹ See an interesting case of naso-pharyngeal growth of this structure (occurring in the service of M. Léon Labbé) reported in the *Annales des Maladies de l'Oreille et du Larynx*, March, 1875.

The patient was etherized, and the entire disease, including the upper lid and contents of the orbit, was removed by Dr. Thaxter. Hæmorrhage was free, but readily controlled by a compress and persulphate of iron.

A good recovery from the operation followed, and the patient was discharged in ten weeks with the wound nearly healed.

September, 1875. This patient remains well at the end of five years. The wound is soundly healed. The orbit is well filled up. The cicatrix is small, soft, painless, and shows no signs of activity. There is not now nor has there ever been any sign of a recurrence. Although it might be claimed by some that she is not cured, yet no one can deny that she has been wonderfully "relieved."

This was a favorable case for operation, inasmuch as the disease was of long duration, of slow growth, and unaccompanied by any constitutional symptoms for a long time. And, furthermore, neither bones nor glands were involved in the disease, and the patient was in fair health.

Malignant Disease of the Upper Jaw; Repeated Removals for Pain; Relieved. — Margaret K., aged sixty, a domestic, first noticed a small tumor on the left side of her face in the spring of 1874. It grew rapidly and was very painful, till the following October, when it was removed through an incision in the cheek. The disease soon reappeared, and the pain became so intense that the infra-orbital nerve was divided subcutaneously, with temporary relief.

She entered the City Hospital January 12, 1875, with a large tumor under her left cheek. The growth invaded the nares, antrum, and orbit, crowding the eye out and totally destroying the sight. The tumor was firm, immovable, and inclined to soften in the centre. There was no enlargement of the glands.

Dr. Cheever removed the growth by free incisions through the cheek, and by tearing the tumor out with the fingers. It came out quite clean. The mouth was not opened nor was the eye removed. The hæmorrhage was profuse, but checked with ferric alum and pressure. The patient rallied well from the operation and went on very well for a month, when the growth reappeared in the left temporal region. She could not open her mouth. The hard palate was crowded down, the pharynx implicated, and the eye crowded partially out of the orbit. The pain was most intense.

On the 19th of March, Dr. Cheever again removed the growth very thoroughly, scooping out a large cavity extending from the roof of the mouth to the orbit, and back to the pharynx. This large space was thoroughly swabbed out with a strong solution of chloride of zinc (one ounce in four ounces of water) and plugged with sponges dipped in ferric alum. The patient soon rallied from this operation, and was pretty comfortable for about five months. Toward the last of August the pain in the orbit became severe and persistent. The lids were enormously swollen, and could not be reduced by acupuncture as at first. The eye was completely removed from the orbit, and, with the lids, rested upon the face. The woman could open her mouth only about half an inch. Swallowing was difficult. The general health was excellent, and had been so since the operation in March.

On the 3d of September Dr. Gay removed the eye, the lower lid, and all the

contents of the orbit. The roof of this cavity was necrosed. The upper lid, not being as painful nor as œdematous as the lower, was allowed to remain as a curtain to the large and unsightly opening in the face. The hæmorrhage was free but was easily checked, and the wound was treated as at the last operation.

The growth, like that removed previously, was soft, juicy, lobulated, and tended to break down in the centre. The microscope showed myriads of small round cells, granular matter, and débris.

In a short time the growth began to project into the mouth, between the alveolar process and the upper lip. The patient could get nothing into her mouth except liquids, and those only very slowly and with pain. Her sufferings became so intense that she peremptorily demanded an operation for the removal of the disease, willing to take any and all risks rather than live as she then did.

September 24th, three weeks after the last operation, she was again etherized, and the upper jaw was removed by Dr. Gay. An incision was made through the centre of the upper lip, around the left ala, and up the side of the nose. The lip and cheek were quickly turned back, no effort being made to check the hæmorrhage. The alveolar and palate processes were divided with forceps, and the jaw, with a large mass of disease, dug and torn out with the fingers, aided by an occasional touch with the knife or scissors. An enormous chasm now extended from the tongue below to the base of the cranium above, and backwards and outwards to the pharynx and zygomatic fossa. As the tissues were extremely vascular the hæmorrhage was most profuse. It was controlled by washing out the wound with chloride of zinc, and packing it with sponges dipped in ferric alum.

The wound in the lip united by first intention. In two days the patient was more comfortable than before the operation, and has remained so ever since, nearly three months. She is able to swallow easily. She has less pain than formerly, and to all outward appearances the growth is not increasing. The pain and œdema of the eyelid have disappeared. She is able to be about the ward nearly or quite all day, and is comparatively comfortable. She has not only obtained relief from all of the operations, but her life has undoubtedly been prolonged thereby.

This case illustrates the benefit to be occasionally obtained from repeated operations for the removal of malignant disease. Gross narrates a case of sarcoma of the breast which was removed twenty-three times in four years; eleven operations having been done in one year. Fifty-two tumors were removed, varying in size from that of a small almond to that of a pullet's egg. Ten years after the last operation the woman was perfectly well.

LETTER FROM PHILADELPHIA.

MESSRS. EDITORS, — I can hardly begin my first letter of the centennial year of our country's existence more appropriately than by giving you such details as I have been able to gather concerning the international medical con-

gress which will meet in Philadelphia next September. Until the publication of the general circular, which you undoubtedly have already seen, there has been the most scrupulous care on the part of the committees to avoid giving publicity to any detail whatsoever of the doings of the medical commission. This will explain any apparently causeless silence in regard to this matter. Even now there is much which would be of interest but which is persistently held back. The reason for this secretiveness seems to be a fear that confused statements will get abroad, for at every new meeting of the medical commission plans previously considered as definite are modified. Indeed, I have been told so late as to-day, by one of the officers of the commission, that the circular already issued and distributed will be again modified. This change will, I believe, relate to subdivision of the sections. The most direct method of imparting information concerning the plan of the congress will be to make synoptic use of the circular which has been sent to the medical and leading secular journals. The following is, then, the purport of this document:—

The medical societies of Philadelphia, in order to unite with their fellow-citizens in celebrating the centennial of American independence, have taken the initiatory steps for the formation of an international medical congress by the appointment of delegates from their respective bodies, who were authorized to organize a scheme for the above purpose. This delegation has organized the Centennial Medical Commission with the following officers: President, Prof. S. D. Gross (of Jefferson College); Vice-Presidents, W. S. W. Ruschenberger, M. D., U. S. 'N., and Prof. Alfred Stillé (of the Pennsylvania University); Recording Secretary, W. B. Atkinson, M. D. (1400 Pine St.); American Corresponding Secretaries, Daniel G. Brinton, M. D., Editor *Medical and Surgical Reporter*, 2027 Arch St., and Prof. William Goodell (of Pennsylvania University, Twentieth and Hamilton sts.); Foreign Corresponding Secretaries, Richard J. Dunglison, M. D. (814 North Sixteenth St.), and R. M. Bertolet (113 South Broad St.); Treasurer, Casper Wistar, M. D. The congress will open in Philadelphia on the 4th and terminate on the 9th of September, 1876. The commission propose the following general plan of organization and business:—

I. The congress shall consist of delegates, American and foreign, the former representing the American Medical Association and state and territorial medical societies of the Union, the latter the principal medical societies of other countries.

II. The officers shall consist of a president, ten vice-presidents, four secretaries, a treasurer, and a committee of publication, to be elected by the congress at its first session, on a report of a committee of nomination.

III. Morning sessions of the congress shall be devoted to general business and reading of discourses; afternoon sessions to meetings of the nine sections, namely:—

- (1.) Medicine, including pathology, pathological anatomy, and therapeutics.
- (2.) Biology, including anatomy, histology, physiology, and microscopy.
- (3.) Surgery.
- (4.) Dermatology and syphilology.
- (5.) Obstetrics and diseases of women and children.

- (6.) Chemistry, toxicology, and medical jurisprudence.
- (7.) Sanitary science, including hygiene and medical statistics.
- (8.) Ophthalmology and otology (will probably be subdivided into two separate sections).
- (9.) Mental diseases.

IV. The language of the congress shall be the English, but not to the exclusion of other languages in which members can fluently express themselves. Gentlemen intending to make communications on scientific subjects are requested to notify the commission at the earliest practicable date, in order that places on the programme may be assigned them. In order to make the congress purely international, invitations to send delegates will be extended to all the prominent medical societies in Europe, British Dominions, Mexico, Central and South America, Sandwich Islands, East and West Indies, China, Japan, and Australia. Invitations will also be tendered to medical gentlemen of high scientific position, and distinguished visitors may be admitted to membership by vote of the congress.

The Centennial Medical Commission tender in advance to their brethren in all parts of the world cordial welcome and a generous hospitality during their sojourn in Philadelphia.

The registration book will be open daily in the hall of the College of Physicians, northeast corner of Thirteenth and Locust streets from Thursday, August 31st, twelve to three P. M. Credentials must in every case be presented.

Gentlemen who attend the congress can have their correspondence addressed to the care of the College of Physicians as above.

Further information may be obtained by addressing the corresponding secretaries, to whom *all* communications must be addressed.

Such, in brief, is the circular of the commission. Annexed to it is a list of the executive committees for the States; appointed in Boston and New England, are: Drs. H. J. Bigelow, H. I. Bowditch, Edward H. Clarke, Calvin Ellis, and D. Humphreys Storer, of Boston; Drs. A. B. Crosby, Concord, N. H., E. T. Caswell, Providence, R. I., William W. Greene, Portland, Me., Stephen G. Hubbard and C. L. Ives, New Haven, Conn., Isaac G. Porter, New London, Conn., and Edwin M. Snow, Providence, R. I.

The place of meeting has not yet been positively selected. The judges' hall of the centennial buildings has been mentioned, but it would be inconvenient, not only because of its distance from the city, but also because, in order to obtain admittance thereto, the exhibition fee would be unavoidably demanded in every instance. Probably either Horticultural Hall, on Broad Street, or one of the halls of the university buildings will be the selection of the commission.

A registration fee will be required from each American delegate, but none from foreign. The sum total of these fees will assist in paying the expenses of the congress and of the publication of the transactions, a copy of which will be given to each delegate.

During the session there will be a banquet to which foreign delegates will be gratuitously invited. In each of the sections a committee of three has been appointed, whose duty it will be to correspond with men prominent in the various departments of medicine, in order to solicit their coöperation and pres-

ence. I am authorized to state that quite a number of eminent foreign specialists have already signified their intention to attend the congress.

The officers of the congress will be selected from the most distinguished individuals present, whether they be American or foreign.

As yet I have vainly endeavored to secure the names of those gentlemen who have been invited to address the congress. The list as at first prepared was published in the daily prints, months ago, but has since been much modified by the refusal of several of the invited, and now is kept out of sight, and will be until it is definitely known who will or will not deliver addresses. I hope to obtain a full list before I close my letter.

I have been told that in Boston it is understood that inferior men have been asked to supply the places of those who have declined the invitation to address the congress. This is an error.

It has been frequently reported that the hotel accommodations of Philadelphia will be insufficient for the needs of visitors. This is another error, and one which might act against the interests of the city as well as of the exhibition. The hotels will provide not only for those who attend the congress, but for all centennial visitors as well. All the regular hotels have added thirty to fifty per cent. to their ordinary accommodations, and special hotels have been built, or are in process of erection, which will suffice for not less than twenty-five thousand to thirty thousand guests. Besides the ample hotels there will be hundreds of apartments to be obtained from the lodging-house bureau of the centennial commission, which has advertised largely and sent circulars to every house of the better class, requesting all citizens who have or will have spare rooms which they are willing to lease during the exhibition to send their names to the bureau. Agents then visit the various apartments, and ranking each room, according to its convenience and furniture, in one of three classes, set a price upon it. These rooms will be obtained in this way: a visitor wishing a sleeping apartment will apply to the lodging-house bureau. The price of the rooms according to class will be named. The visitor will select the class. Tickets, bearing street and number of the house, one ticket serving for a single day and night, will then be sold to him. Provided with these cards he will seek out the proper house and secure the room. Each day he will surrender a ticket to the proprietor of the house, whose servants will care for the room. Meals will be obtained elsewhere. In this simple manner all will be provided for. To complete this plan of the bureau, each ticket in the hands of a housekeeper will be equivalent to a draft upon the bureau for the sum stipulated in their agreement with him.

In addition to this abundant accommodation, delegates to the medical congress will meet with a generous hospitality at the hands of private medical men.

Dr. William Pepper has been appointed medical director of the international exhibition. His duties will mainly comprise the direction of a hospital to be erected on the centennial grounds, for the aid of visitors or exhibitors who may require medical or surgical aid. Such relief in some cases will necessarily be only temporary, but patients will be put into the proper condition for removal by ambulance to hotel, to apartment, or, in case of bad accidents, to some

permanent hospital. Dr. Pepper has nominated a staff of six assistants, whose appointments have just been issued by the director-general of the exhibition (Mr. Goshora). They will take alternate charge of the centennial hospital either during an entire day or for a fixed number of hours, as may be hereafter decided.

Hugo's ceratoptera vampyrus could not have possessed a greater power of clutching than have those who hold the list of names which I hoped by this time to secure for you. It appears that certain gentlemen who have been requested to address the general congress have also been proposed as the proper persons to read papers before, and open discussions in, the sections. And since it has been decided that no invitee shall be given a double duty, this matter will be righted before the names of the speakers are given for publication. Hence more waiting!

X.

PHILADELPHIA, December 28, 1875.

MESSRS. EDITORS, — The following is a copy of a letter from General Washington in regard to his artificial teeth, which will supplement the one published in the centennial number of the JOURNAL of June 17, 1875. The letter is now in the possession of Mr. Henry Austin Whitney, and was written to "Mr Jn^o Greenwood, Dentist, New York." It is franked "President, U. S."

S. A. G.

PHILADELPHIA, July 1st, 1792.

SIR, — Your letter of the first of May and the box which accompanied it came safe, and duly to hand on the eve of my departure for Virginia; which is the reason why I have not acknowledged the receipt of them sooner.

The contents of the latter (with the alteration which were necessarily made) answered very well — and enclosed you have, in Banknotes, twenty dollars, the sum I have usually sent you, but if it is insufficient let me know it and more shall be forwarded by

Sir

Y^r Obed^t H^{ble} Serv^tG^o WASHINGTON.

WE copy the following from *The Boston Weekly News Letter*, September 6, 1770: —

"A few Weeks since the Operation for the Hare-Lip was performed to great Perfection on a young Man in Milton near Brush-Hill; and a child in Boston has received as much Benefit from the Operation as the Case would admit of, by Mr. Hall Surgeon to the 14th Regiment.

"The Impression these unhappy Sight's are apt to make on married Women, should be an Inducement to have this Defect in Nature rectified early in Life, as there are numerous Instances of the Mother's Affection having impressed her Offspring with the like Deformity."

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING DEC. 25, 1875.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week
New York	1,060,000	541	26
Philadelphia	800,000	304	20
Brooklyn	500,000		
Chicago	400,000	141	18
Boston	342,000	192	29
Cincinnati	260,000		
Providence	100,700	32	17
Worcester	50,000	25	26
Lowell	50,000	20	21
Cambridge	48,000	21	23
Fall River	45,000	18	21
Lawrence	35,000	11	16
Lynn	33,000	9	15
Springfield	31,000	6	10
Salem	26,000	9	18

Normal Death-Rate, 17 per 1000.

CORRECTION. — In a letter published in the JOURNAL of December 23d, an allusion was made to "the office of the State Board of Charities at 30 Pemberton Square." In justice to every one concerned it should be stated that reference was had to the office of the Directors of Public Institutions of the city of Boston; this office is at 30 Pemberton Square, and has no connection with that of the State Board of Charities.

NORFOLK DISTRICT MEDICAL SOCIETY. — The regular meeting will be held at the Willard House, Hyde Park, on Tuesday, January 11th, at eleven o'clock. The following papers will be read: On Intercranial Syphilis, by Dr. R. T. Edes; Paralysis a Result of Maternal Impressions, by Dr. J. Seaverns; Ulcerations of the Os Uteri, by Dr. C. E. Wing; New Surgical Apparatus, by Dr. W. C. B. Fifield; School Children and Contagious Diseases, by Dr. A. H. Nichols. Meeting of the Board of Censors at ten A. M. Dinner at 1.45 P. M.

BOOKS AND PAMPHLETS RECEIVED. — In Memory of Ernst Krackowizer. New York: G. P. Putnam's Sons. 1875.

On Certain Morbid Alterations of the Mucous Membrane. By Beverly Robinson, M. D. (With other pamphlets.)

The Canadian Journal of Medical Science. Toronto, January, 1876.

Physician's Visiting List for 1876. Philadelphia: Lindsay and Blakiston. 1876. (From A. Williams & Co.)

Observations on Nasal Catarrh and Catarrh Deafness. By A. N. Williamson, M. D. New York. 1875.

Die Vererbung der Syphilis. Von Dr. M. Kassowitz. Wien, 1876. Wilhelm Braumüller.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XCIV. — THURSDAY, JANUARY 13, 1876. — NO. 2.

GENERAL SOFTENING OF THE BRAIN SELDOM SEEN AS A PATHOLOGICAL CONDITION, NEVER AS A CLINICAL DISEASE.

BY CALVIN ELLIS, M. D.,

Professor of Clinical Medicine in Harvard University.

It may be said by some, and has been said, that such an announcement is unnecessary ; that it is perfectly well understood that softening of the brain is always partial, limited to a certain portion or to certain portions of the organ.

To show that correct views in regard to this do *not* prevail, we will state that for many years it has been necessary to teach students that there is no such disease as general softening of the brain, their language showing that they had somewhere acquired a belief not only in the reality of such a disease, but also in their capacity to diagnosticate it.

We constantly hear that a certain person is threatened with, or has, softening of the brain, and the term is used in such a way by physicians, as well as by the public, as to imply that there is general softening. To show how common is the belief in such a disease, and in symptoms indicating it, I will quote the answers of a number of physicians in charge of insane asylums, whose experience of the prevalence of such a belief was asked. One says, "I should judge that two thirds of the cases of chronic disease of the mind were considered by physicians as instances of softening." Another writes, "I do most confidently state that I have often heard physicians speak of 'softening of the brain' in a manner that conveyed to my mind the impression that they referred to a softening of the whole mass of the brain, and not to the local softening." A third says, "I have *very, very frequently* heard the term 'softening of the brain' used by physicians as expressing a general softening of that organ." A fourth writes, "In common language, dementia is known as 'softening of the brain.' Persons who are losing their faculties from whatever cause are spoken of as having 'softening of the brain.' Persons in deep melancholia, who cannot be interested in anything outside of their deep and silent miseries, are in common language said to have 'softening of the brain,' when this is not the pathological change."

Dr. Tanner says,¹ "The general symptoms of *cerebral softening* are more or less severe and persistent pain in the head, attacks of vertigo, coming on suddenly and soon passing off; a diminution of intellectual power, embarrassment in answering questions, depression of spirits, and a tendency to shed tears on any excitement; prickings and twitchings in the limbs, sometimes pain and sometimes numbness; a tendency to sleep, especially after meals, and more or less impairment of vision and hearing." Still farther on we are told that "the *ramollissement* is usually partial," which implies that it may be general. Without asserting that the intention of the writer was to describe a general softening, the symptoms detailed are of such a character that they certainly do not indicate a partial softening, which is afterwards suggested by other symptoms, but the description of this last is so blended with, and follows so immediately the above that the student must acquire a confused idea of the clinical history of what he has so often heard called softening of the brain.

J. Russell Reynolds and H. Charlton Bastian say,² "Softening of the brain is a disease characterized during life by impairment of mind, sensibility, and motility, and after death by diminished consistence and degeneration of the cerebral substance. The disease now to be described is that which has been known as a white or non-inflammatory softening; *ramollissement blanc* or *ramollissement non-inflammatoire*. Causes. There is little that is satisfactory which can be said with regard to the remote ætiology of softening of the brain. Among the conditions which predispose to its occurrence the most important is age, or agedness. Softening of the brain is essentially a manifestation of decay, and this may be either the natural result of the wear and tear of a life's work, or it may be the early outcome of excessive strain. The real cause is that waste of tissue which is unbalanced by repair, and this may come from the long continuance of work — old age — or the unhealthy severity of work and its undue relation to rest. The proximate causes may be resolved, as it will appear in the section on pathology, into morbid conditions of the vascular system. Neither sex, constitution, nor season of the year has been shown to exert any marked predisposing influence, nor has any distinct relation been made out between any one particular condition of the heart and cerebral softening. Degeneration of the kidneys and impaired nutrition of the heart and vessels are among the conditions which frequently accompany *ramollissement*; but these ought to be regarded as certain parts of a general change, of which the cerebral softening is but another counterpart, rather than as predisposing causes of its existence."

The authors of the above are so well acquainted with nervous disor-

¹ Practice of Medicine, 1866.

² Reynolds's System of Medicine, ii. 446.

ders as to make it probable that, not bearing in mind the views of those less skilled than themselves, they did not appreciate the weight and meaning of these words for the believers in general softening.

With such a general belief in the reality of the disease and such statements as are quoted, the difficulty has been to prove the negation. We will first offer evidence on the pathological side of the question.

Foerster says,¹ "Independently of the hydrocephalic softening and that diminution of the consistence of the whole brain, found as a post-mortem change, softening of the brain involves only larger or smaller portions of the same."

As a matter of indirect clinical evidence it is significant that such authors as Hasse, Trousseau, and Jaccoud in no way allude to *general* softening, while they describe very accurately the *partial*. But Dr. J. Hughlings Jackson, in a lecture on softening of the brain,² has stated clearly what the disease is *not* and what it *is*. He says, "We very frequently hear the expression 'softening of the brain.' It is often used by educated patients; for many people who simply suffer slight but often temporary nervous exhaustion think, always erroneously, that they have 'softening' or are going to have it. It is really an expression of pathological application, but, just as the symptomatic word apoplexy has come to have a pathological meaning (effusion of blood), so the pathological term 'softening' has come — so at least it appears to me — to be used, even by some medical men, as a name for a certain rude clinical grouping of symptoms in cases in which there really is no softening. This use of the term is to be deprecated. Let me mention the symptoms of cases wrongly called 'cases of softening.'"

"We see patients who have become excitable, irritable in temper, and desponding; they have found that their attention easily fails, and that they cannot do their accustomed work; they usually sleep badly; they often have what they call headache, but it is mostly not an ordinary headache, either in kind or position; it is a feeling of pressure or sometimes of burning, and its seat is the vertex or back of the head; there is very often, indeed, a disagreeable feeling at the occiput and in the upper parts of the spine, more distressing than pain, — an intolerable physical feeling; the queer feeling in the spine is often intermittent, and frequently comes on slowly, with great depression of spirits. Altogether there is a strange mixture of 'mental' and physical symptoms.

"Recognizing the group of symptoms I have mentioned as a fair clinical entity, deserving particularly careful study, I do not see the evidence for the diagnosis that softening of the brain is the pathological change causing them. Such cases are called by the laity nervous debility, and often by medical men hypochondriasis. The symptoms, I

¹ Handbuch der speciellen pathologischen Anatomie, Leipzig, 1863, page 74.

² The Lancet, September 4, 1875.

think, indicate nervous exhaustion, beginning often in the sympathetic nervous system, and secondarily affecting the nutrition of the highest centres in the brain. Of course this is only hypothetical, for there is no morbid anatomy of such cases. Every one's conclusion as to their pathology must therefore be hypothetical. These symptoms are often produced by excesses, and especially by sexual excesses, and by 'fast life' generally; they are sometimes suddenly developed by fright, and may be brought on by misery or by overwork, either of the mind or of the body, especially when the work is done under responsibility. Of course they occur most often in persons who inherit a weak temperament, who bear trouble badly, who are easily excited and easily depressed. In some of the cases the patients get quite well by simple, common-sense care, and the delusion that they have softening vanishes. In the graver, prolonged, and ingravescent cases I should think there was no softening of the brain, but rather greater firmness of it; atrophy of nerve cells and fibres, with increase of connective tissue; there is some atrophy of the brain. In saying this I am not making a very strong statement. We often see considerable atrophy of the brain at post-mortem examinations on those who have died of non-cerebral disease, and whose mental condition has attracted no attention. Atrophy of the brain is normal in old people, it is often seen in middle-aged drunkards, and even in comparatively young people who have been long bedridden by wasting diseases not primarily involving the nervous centres. I mention this, as you may think the statement that there is some atrophy of the brain an extravagant conclusion as to the state of things in a man whose symptoms are those of prolonged and severe hypochondriasis or nervous debility, or whatever the right name or label is.

"Be sure there is no softening in these cases. Indeed, I do not see how the diagnosis that there is actual softening of the brain is in any case to be possibly arrived at, unless the patient has certain local paralytic symptoms, as hemiplegia, or some other symptoms implying a local cerebral lesion, such as an affection of speech; or again, unless there be signs of cerebral tumor (severe headache, urgent vomiting, and double optic neuritis), or evidence of injury to the head. For, so far as I know, cerebral softening is always local; I know nothing of general or universal softening of the brain. To be warranted in diagnosing softening you must have symptoms which point to local disease.

"I do not say that local cerebral softening cannot exist without localizing symptoms. I only say that in their absence you are not warranted in diagnosing its existence. We know that large parts of the brain may be destroyed without any marked local symptoms resulting; these parts may be destroyed by the process of softening without causing marked local symptoms. But in these cases the softening is mostly about tumors or other kinds of adventitious products. It is, however, almost an abuse

of language to speak of these as cases of softening. The softening is, I suppose, a result of encephalitis about the tumor. We shall not refer to these cases again. For all practical purposes they belong to a distinct category. The cases which deserve to be called cases of softening are cases in which there is blocking up of cerebral arteries, or, which is infinitely rarer, of cerebral veins. Of these only shall I speak."

So clear a statement from one who has had the best opportunities for observation of this class of diseases ought to carry conviction, and it is to be hoped that it will do something to prevent the further use of an unmeaning term by physicians.

Many of the erroneous views upon medical matters held by the public are probably survivals of what was once believed and taught by physicians. While we cannot now avoid teaching much which may hereafter be regarded as merely the most generally accepted error of the time, we can aid in preventing the use of terms which are proved to be false.



A CASE OF CHRONIC INVERSION OF THE UTERUS SUCCESSFULLY TREATED BY PERSISTENT MECHANICAL PRESSURE.¹

BY GEORGE G. TARBELL, M. D.,

Visiting Physician to the Massachusetts General Hospital.

MRS. M. S. entered the Massachusetts General Hospital, July 13, 1875, with the following history. She was thirty-seven years old. She had always been healthy, though not robust. She had been married two years. Ten months ago, after a labor of forty-eight hours, she was delivered, by instruments and under ether, of her first child, living and weighing eight and one half pounds. After twenty-four hours of labor, and when she had become extremely exhausted, she was bled almost to faintness, a pint or more of blood being drawn from a vein near the flexure of the arm. When she recovered consciousness after the ether, the physician was removing the placenta, an operation which he accomplished with difficulty, giving her much pain.

Hæmorrhage was constant and very abundant for a week or two, but not so excessive, except on one occasion, as to cause alarm. The urine was drawn with a catheter for ten days. On the third day after delivery, while attempting to raise herself in bed, she discovered that the "womb came outside the vagina and bled profusely." The physician, being sent for, replaced it within the vagina, made an ineffectual attempt to re-invert it, and in the course of the next week or two made several other futile efforts, with and without the aid of ether. During the

¹ Reported to the Boston Society for Medical Improvement, December 13, 1875.

fourth and fifth months after delivery, again, five separate attempts were made under ether to reduce it, but in vain. What method was pursued in these efforts I have no means of knowing.

At the time of admission to the hospital, ten months after her delivery, the patient was blanched and exhausted to the last degree by the hæmorrhage, which had continued at frequent intervals, and which had been excessive during the first week of each of the previous three months, — the supposed menstrual period. Examination disclosed a pyriform tumor within the vagina, which a further careful examination demonstrated to be the uterus completely inverted; its size was that of a woman's fist. Its surface was ragged and ulcerated, and bled freely upon touch. Its body was firm and hard, and the neck was narrowly contracted.

The patient being etherized, attempts at reduction were made by Dr. Minot and myself, in the following manner. A hand was introduced within the vagina, grasping the whole uterus, kneading it with the fingers to render it more pliable, and pushing it upward against the other hand and the abdominal walls pressed firmly downward just above the pubes. Relieving each other, and using all the force we deemed safe, we persisted in unremitting efforts for two hours, but to no purpose. The body of the uterus was softer and more pliable as a result of our efforts, but the os was unyielding, and we had gained nothing towards the reduction of the inversion.

An india-rubber air-pessary was then introduced into the vagina and inflated. On the fifth day afterward the bag was removed, but no change was found in the condition of the parts. The patient was again etherized, and three longitudinal incisions were made, one in front and one on each side of the os and cervix, to the depth of about one third of an inch. Dr. Minot and I then repeated our attempts at re-inversion, but without avail, and we abandoned that method.

I then procured a flexible rubber cup, of about the size of a half lemon, and with a straight and inflexible stem eight inches long. The cup was applied to the inverted fundus, and the end of the stem, projecting some distance from the vagina, was attached by straps, one over the pubes and one over the sacrum, to a belt fastened around the waist. The crest of the ilium of course kept this belt from being dragged downward; and by buckling the two straps tighter or more loosely we could easily regulate the direction and amount of the force applied. Both straps were buckled tightly, and the patient was kept upon her back in bed. On the second day she had a chill with subsequent fever (temperature 102°), and some tenderness of the abdomen. Whether this was due to the pessary, or to the previous attempts at reduction, I cannot say, but the pessary was removed, and in four or five days these symptoms subsided.

The pessary — *i. e.*, the cup with the stem — was now reinserted, and the straps tightened so as to produce constant firm pressure upward against the whole fundus. On the third day the os seemed to have yielded so as to allow a small portion of the cervix to resume its normal position. On the seventh day the uterus was reinverted one half, so that the fundus was at a level with the os. The cup was then cut off, leaving only its base, a flat surface three fourths of an inch in diameter, to be applied to the fundus. On the eighth day this was found to have passed one and one half inches up within the cervix, pushing the fundus before it, and on the ninth day of the continuous pressure the inversion was completely reduced, the sound passing three inches above the os.

During the treatment there was a profuse foetid and purulent discharge from the uterine surface, which, in the exhausted condition of the woman, might easily have proved the origin of septic poisoning, had it not been for the abundant vaginal douches of tepid water frequently given by the skillful nurse in such a manner as not to disturb the apparatus.

I examined the woman again a few days ago, three and a half months after the treatment. She was rapidly recovering from the extreme anæmia, and called herself quite well. She had menstruated regularly each month, though the flow of blood was but slight. The uterus was in normal position, was not painful or tender to touch, and the sound entered two and three fourths inches.

It will be seen that the constant pressure wearied out the constricting muscles of the os, that the cervix was the first part to be replaced and the fundus last, much after the manner of reducing a hernia. The inversion undoubtedly occurred at the time of delivery. Forcible taxis effected nothing, and incision of the os and cervix did not render them any more easily dilatable. The air-pessary was perhaps not long enough persisted in to say whether it would eventually have accomplished its object.

In all the cases recorded and quoted by various authors, the methods adopted in their attempts at reduction divide themselves under two heads: (1) forcible taxis, and (2) prolonged gentle pressure. By the former method many cases are undoubtedly reduced, but many come to amputation or to death as a result of the attempts at reduction.

One of the most daring, it might almost be called reckless, attempts at forcible reduction is recorded by Professor Thomas, of New York, who in 1869 treated a case by making an incision through the abdominal walls and peritoneum, inserting through this opening a dilator, made like an ordinary glove-stretcher, into the inverted os, dilating the constriction, and, with the other hand in the vagina, pushing up the uterus as the dilator was withdrawn. The reduction was accomplished with

difficulty, for the os contracted like india-rubber the instant the dilator was removed. Nevertheless the woman recovered, not only from the incised wound of the peritoneum, but also from a lacerated wound made by the fingers thrust through the vaginal wall, between the uterus and the bladder, into the peritoneal cavity, in the violence of the attempts to reduce the inversion. Professor Thomas's own account of the method would not encourage another to repeat it, except as a last resort, and as possibly preferable to amputation.

Of the milder methods, that of Dr. Tyler Smith, by sustained elastic pressure by the air or water bag within the vagina, is the one which has been most frequently employed. It is perfectly safe, and often accomplishes the desired result, especially when combined with frequent manipulation of the uterus; but in about one fourth of the recorded cases it has proved ineffectual.

The method I pursued would seem equally safe and much preferable, because the force can be so nicely regulated, and applied in the desired direction, without that great distention of the vagina and pelvis which is unbearable to many women. I have found recorded but two cases treated in this way (both of them successfully), by Dr. Robert Barnes, who fully describes the method and figures the apparatus in his recent *Clinical History of the Diseases of Women*. After a most complete *résumé* of all the different procedures which have been adopted, he shows conclusively, by a comparison of results, that sustained elastic or solid pressure is much safer for the woman and much surer to accomplish the reduction than forcible taxis. He clearly enunciates the principles which should always govern attempts at reduction, saying of forcible taxis and sustained pressure, "The principles of the two procedures are totally opposite. One tries to overcome resistance by sheer force rapidly applied, the other by gentle pressure long sustained. The first is replete with danger, the second absolutely safe." He also shows that, of all the methods of procuring a constant pressure, this one, of the rubber cup and stem attached outside, is the best of all, because the direction and amount of the force used can be so nicely regulated by the physician.

The recorded cases show that inversion generally occurs at the time of delivery, either in consequence of traction upon the still attached placenta, or more rarely in consequence of paralysis of the placental site. In 1847, Mr. Cross, collated four hundred cases. Three hundred and fifty occurred soon after delivery, and forty of the remaining fifty were due to polypi. It seems also to be pretty well established that spontaneous replacement of a chronic inversion rarely, if ever, takes place. There are several cases related which would go to show its possibility, but they are not established beyond a doubt. A recent inversion is generally easily replaced, and no doubt often spontaneously

so; but Dr. West says, "It is easier to conceive how an experienced man should commit an error of diagnosis than to understand how any effort of nature could cure a chronic inversion of the womb." The force of this remark will be seen when it is remembered that some of the most experienced gynæcologists and obstetricians have amputated or attempted to amputate the uterus, under the impression that it was a polypus.

Here in America, the favorite method of treatment has been taxis, *i. e.*, manipulations with the hands, either gentle or forcible, according to the judgment of the individual operator. A few years ago, Dr. White, of Buffalo, related to this society several cases treated by himself in this way, supplementing his hands by an instrument like the ordinary single wooden stethoscope. His results were very favorable, and occasionally remarkable, but we cannot forget the danger of producing a peritonitis, even without lacerating the vaginal or uterine walls.

RECENT PROGRESS IN MEDICAL CHEMISTRY.¹

BY EDWARD S. WOOD, M. D.

URINARY CHEMISTRY.

Bile Pigments in the Urine. — L. Lewin² has had a specimen of urine to examine which contained bile pigments, and yet in which, after filtration, Gmelin's test (by nitric acid) failed to detect them. The urine was of a greenish-brown color, and when it was shaken a greenish-yellow foam was perceptible on the surface, which would lead one to suspect the presence of a considerable amount of bile pigment. The sediment was of a deep reddish-brown color, and consisted of urates. This sediment, when dissolved in warm water, gave the characteristic play of colors for bile pigments with Gmelin's test, while the filtered urine gave no such reaction. The sediment must, therefore, have carried down mechanically all of the pigment. Hence when the presence of bile pigments is suspected, and the urine contains a sediment of urates, not only the fluid but also the sediment must be tested.

Bile pigments have the property of adhering to precipitates much more powerfully than any of the other pigments, either normal or abnormal, of the urine. Hence Dr. J. F. Tarchanoff³ recommends, in order to separate with certainty the biliary from the urinary pigments, precipitating the urine with milk of lime, freeing from an excess of lime by a current of carbonic acid gas, allowing the whole to stand a few hours, filtering, and washing the precipitate with water. The bile pigments are contained in the precipitate, while the indican, hæmoglobin,

¹ Concluded from page 15.

² Centralblatt für die medicinischen Wissenschaften, 1875, No. 6.

³ Pflüger's Archiv, ix. 53.

and methæmoglobin are in the filtrate. The precipitate is then dissolved in acetic acid, and tested by Gmelin's test.

In this way the author detected biliary pigment in the urine of dogs after the injection of a hæmoglobin solution into the jugular vein, and also after the injection of water into the vein, but not to so great an extent. Naunyn and Nasse did not succeed in finding the biliary pigment in the urine under similar circumstances; Tarchanoff refers their failure to the fact that they applied Gmelin's test directly to the urine, by which small quantities can easily be overlooked.

E. Fleischl¹ recommends a modification of Gmelin's test, by which it is made much more delicate. Instead of having impure nitric acid added in such a way that it will form a separate layer at the bottom, the urine should be thoroughly mixed with pure nitric acid, or still better with a solution of the nitrate of sodium, and then concentrated sulphuric acid should be carefully added so as to form a separate layer at the bottom. The play of colors forms at the junction of the urine and the sulphuric acid. The advantage of this modification is that the pigment is not oxidized so rapidly, and therefore the color is not changed so quickly, and is not so liable to be overlooked.

Bilirubin crystals have been detected by Orth² in the blood and kidneys of new-born children thirty-seven times during an observation of about one and a half years in the Berlin pathological institute. These crystals were needle-shaped in the blood and rhombic tables in the kidneys. The liver frequently contained two forms of the pigment: first, the yellow amorphous deposits in the liver-cells ordinarily seen in jaundice, and secondly, reddish or brownish crystals scattered about through the whole parenchyma of the liver. He considers the cause of this formation to be icterus neonatorum, and crystallization of the pigment after death. In adults crystals are never found except after acute yellow atrophy of the liver, although the amorphous deposit is generally found after death in cases of deep jaundice.

When bilirubin is dissolved in a little alkali, and the solution is exposed to the air, one atom of oxygen is absorbed, and the reddish-brown color of the bilirubin changes to the green of biliverdin. This latter pigment has been prepared in a pure form by Maly³ by thus exposing a solution of bilirubin in very dilute liquor sodii until the color became green, then precipitating the pigment with hydrochloric acid, washing, dissolving in hot alcohol, and re-precipitating with water. The analysis of this pure biliverdin differs from that of Stædeler by two atoms of hydrogen and one of oxygen, the formula being $C_{16}H_{18}N_2O_4$, instead of

¹ *Centralblatt für die medicinischen Wissenschaften*, 1875, No. 34.

² *Centralblatt für die medicinischen Wissenschaften*, 1875, No. 46; from *Virchow's Archiv*, 1881, 447.

³ *Maly's Jahresbericht*, 1875, page 303.

in the absorption by the former of only one atom of oxygen. This explains the change which takes place in the urine of jaundice, the color changing from a reddish brown to a green.

If this change be permitted to go still farther, two more atoms of oxygen are absorbed, and the color changes through a blue to a red, or $C_{16}H_{20}N_2O_5$, showing that the change from bilirubin to biliverdin consists in dilute solutions to a yellow. This red pigment, termed by Maly choletelin, has been examined with the spectroscope by K. Vierordt.¹ It is soluble in alcohol and dilute alkaline solutions. It is the final colored product of Gmelin's test for bilirubin. The choletelin examined by Vierordt was made by oxidizing bilirubin with nitrous acid. A layer, one centimetre thick, of a one half per cent. alcoholic solution of choletelin, placed before the slit of the spectroscope, gave a peculiar spectrum. The outer red rays of light were absorbed the least, and the outer violet rays the most, the absorption increasing steadily towards the violet end of the spectrum. There were no absorption bands, as is the case with hydrobilirubin. The absorption of the outer violet was one hundred and forty-two times stronger than that of the outer red. After an alkaline solution of biliverdin had stood fifty-six days the color changed to that of a solution of choletelin, and by spectroscopic examination it was found that it contained both biliverdin and choletelin, but that the entire amount of these corresponded to only one fifth of the biliverdin originally present, the other four fifths having been oxidized to colorless products.

TOXICOLOGY.

Detection of Arsenic. — M. Armand Gautier² recommends a new method for the destruction of organic matter in searching for arsenic in the animal fluids and tissues, by means of which he has certainly obtained most excellent results. His method is as follows.

About one hundred grammes of the tissues are cut up, placed in an evaporating dish, thirty grammes of concentrated nitric acid added, and the whole warmed gently. It is not necessary to divide the organs into such small fragments as when the other processes are used. The heat should be withdrawn when the mass becomes viscous and tends to attach itself to the sides of the vessel. Then add six grammes of concentrated sulphuric acid, and heat moderately till the brownish-black mass begins to adhere to the bottom of the dish. Next add, drop by drop, fifteen grammes of nitric acid, continuing the heat just to the point of vaporizing the sulphuric acid. The whole liquefies, and nitrous fumes are evolved. Continue the heat till the mass begins to carbonize, and dense fumes are given off. The black residue is then easily reduced to powder and extracted with boiling water. Filter, reduce the filtrate by

¹ Zeitschrift für Biologie, x. 399.

² Journal de Pharmacie et de Chimie, October and November, 1875.

boiling with the acid sulphite of sodium, and precipitate the arsenic with sulphuretted hydrogen in the ordinary way.

The advantages of this method are that no arsenic is volatilized as the terchloride, that the carbonaceous mass left upon the filter paper contains no arsenic, and that all of the arsenic originally present can be isolated and estimated.

M. Gautier estimates the amount of arsenic present by Marsh's test, and contradicts the statements made by others that all of the arsenic which is introduced into a Marsh's apparatus cannot be recovered from the arseniuretted hydrogen evolved, his experience having been the reverse of this. The sulphide of arsenic formed by the sulphuretted hydrogen is oxidized to the form of arsenic acid, which can be placed in the Marsh's flask.

Several precautions are necessary in using Marsh's apparatus for the quantitative estimation of arsenic. The method pursued by M. Gautier is to place in a flask of about two hundred cubic centimetres' capacity about twenty-five grammes of zinc and some sulphuric acid diluted with five times its volume of water. The whole is to be kept cool during the entire operation. The gas evolved is to be passed first through a drying tube, and then through a hard glass tube of two millimetres' diameter, which is surrounded for twenty or twenty-five centimetres with tinsel, and heated. After the air is expelled from the apparatus, the arsenic is dissolved in forty-five cubic centimetres of the dilute acid, to which has been added five cubic centimetres of strong acid introduced into the flask in small portions at a time. If the flask be kept cool no mirror can be obtained on a porcelain surface introduced into the ignited jet. Then twenty-five grammes more of the dilute acid with five grammes of the strong are mixed and poured into the flask little by little, and finally, a third mixture of twenty-five grammes of the dilute acid with twelve of the strong is added in the same way. After the effervescence has nearly ceased, the glass tube containing the arsenic mirror is removed and weighed. The difference between the weight of the tube alone and the tube with the mirror is the weight of the metallic arsenic in the substances examined. This operation with Marsh's apparatus requires from two and one half to three hours for its completion.

In this manner the author obtained within one tenth of a milligramme of the entire amount of arsenic introduced. In one case an amount of arsenious acid corresponding to .00379 grammes of metallic arsenic was mixed with one hundred grammes of muscle, and .00372 grammes of arsenic was recovered. In another, .00188 grammes mixed with one hundred grammes of blood gave .00178 grammes of arsenic in the tube.

A General Antidote.—J. Jeannel¹ recommends the following as an antidote which should be kept constantly prepared by druggists:—

¹ *Annales d'Hygiène*, April, 1875.

Persulphate of iron solution (density = 1.450)	100 parts.
Water	800 parts.
Calcined magnesia	80 parts.
Animal charcoal	40 parts.

The iron solution should be kept in a separate bottle from the mixture of the other three substances, and should be mixed with it just before using.

This mixture acts as a perfect antidote for arsenic, and is preferable to the ferric hydrate because the latter deteriorates upon keeping. It also acts as a perfect antidote for compounds of zinc and digitalin, and nearly neutralizes the action of compounds of copper. It delays considerably the action of the salts of morphia and strychnia, and to a slight extent that of the compounds of mercury. It has no effect whatever in counteracting the action of the cyanide of mercury, tartar emetic, hydrocyanic acid, phosphorus, and the caustic alkalies.

A freshly prepared mixture of the sulphide of iron, magnesia, and sulphate of sodium acts as a perfect antidote for compounds of copper, corrosive sublimate, and the cyanide of mercury.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

F. B. GREENOUGH, M. D., SECRETARY.

NOVEMBER 22, 1875. *Lightning Stroke*. — DR. J. J. PUTNAM reported the case. The patient, a woman, while standing at an open window was struck by lightning, and was picked up in a closet which was at the other side of the room. She was partially unconscious, but gradually recovered; the right arm and left leg were paralyzed, but the use of the arm returned during the night, and the leg gradually regained its normal condition.

There were several burns: two deep ones were just below the false ribs on the right side; some superficial ones about three inches wide on the posterior surface of the paralyzed limbs, that on the left thigh following exactly the course of the sciatic nerve. The patient remained weak and troubled with neuralgic pains for several months. A boot was shown which she wore at the time, and which was almost torn to pieces.

In this case the peripheral nerves seem to have suffered much more than the central nervous system, although the reverse has been observed by Eulenburg. Except at the very first there were no cerebral symptoms.

DR. MINOT said that it had been stated that since lightning-rods were introduced in the British navy, not a single vessel had been damaged by lightning.

Lead-Poisoning. — DR. PUTNAM reported a case showing the great susceptibility of some persons to lead poison. The patient was at present in the Massachusetts General Hospital, quite prostrated, apparently from the effects of lead. He had had wrist-drop eighteen months ago, and the only possible source of lead was the drinking-water, which, however, had been used by many

others with impunity. Analysis had shown that this, as well as the patient's urine, contained lead, although in small amount.

DR. ABBOT knew of an instance in which the toxicological effects of lead were developed by water containing one eighth of a grain in the gallon.

DR. WHEELER spoke of a case in which the glazing of the bottom of a tea-kettle (which contains a small amount of lead) was chipped off, producing poisoning. The patient left the house and improved; on returning, however, there was a relapse. The other members of the family were not affected.

Treatment of Perforations of the Membrana Tympani. — DR. C. J. BLAKE described a method of treatment in certain cases of perforation of the membrana tympani, consisting in the application of pieces of sized paper large enough to cover the opening, and sufficiently moistened to insure their adherence to the membrane. This treatment is applicable only to those cases where there is no discharge into the tympanic cavity, or where it is so slight as to escape readily through the Eustachian tube without discharging through the perforation in the membrana tympani. The application of the paper covering possesses this advantage over the usual treatment by incision of the edges of the perforation or the touching with caustics, that it keeps up a slight irritation of the parts, favoring a cicatricial growth from the edges of the perforation and at the same time affords a protection to the new tissue. The hearing also is usually improved immediately, and in favorable cases the paper remains in position until the opening has completely closed, when it is removed by the natural process of reproduction of the dermoid coat of the membrana tympani, without the necessity for mechanical interference. Should the paper come away before the closure of the perforation is completed, it is easily reapplied, and cases in which this has occurred show a change in the shape and diminution in size of the perforation with each successive application, evidencing continued growth of cicatricial tissue. Ordinary writing-paper of varying thickness may be employed, according to the size and position of the perforation. The paper, cut a little larger than the opening in the membrana tympani, should be moistened and may then be applied by means of a pair of fine forceps or a cotton-tipped probe dipped in water. The sizing of the paper, well moistened, is sufficient to secure the proper adherence of the paper, the patient being warned not to inflate the middle ear for at least forty-eight hours after its application.

In the class of cases to which this treatment is appropriate the application of the paper as described has given most satisfactory results.

Cancer of Stomach. — DR. MINOT reported the case. The patient was a gentleman seventy years old, but appearing considerably younger, who had suffered for a year or two past with dyspepsia and hypochondriasis. Early in the spring the dyspeptic symptoms increased; there was some vomiting, which afterwards increased, so that he would frequently rise from the table and vomit what he had eaten; there were also progressive emaciation, loss of strength, and pain in various places, especially in the left shoulder, back of the neck, and pharynx. There was no marked pain in the epigastrium. After October 1st he was not able to swallow solid food, and lived chiefly upon small quantities of coffee, and milk thickened with flour. Under this diet he passed

several weeks without vomiting. No tumor could be detected until a few days before death, when a lump was felt just above the navel; this was undoubtedly an enlarged mesenteric gland. There was no constipation until during the last week of life. The pulse was of good strength, and moderate in rate, till shortly before death.

DR. ELLIS reported the result of the autopsy. There was a cancerous mass involving the whole circumference of the œsophagus at the cardiac orifice, and extending upward about an inch and a half. The tumor projected into the cavity of the stomach, in the vicinity of the cardiac orifice, in three or four distinct lobes, so that when the edges of this organ, which had been cut open, were brought together, it was evident that the cardiac orifice must have been almost entirely stopped up, the only possible manner in which even liquids could have entered being by running between these lobes, which were pressed closely together. The mucous membrane of the lower part of the œsophagus was ulcerated, but not that of the stomach. Quite a large carcinomatous nodule or aggregation of nodules was found behind the stomach, in the neighborhood of the pancreas. Carcinomatous nodules were found in the liver. The lower and posterior parts of the lungs were in a state of hypostatic hep-
atization.

DR. J. B. S. JACKSON said that this case was a rare one as far as the seat of the disease was concerned. He spoke of a case of Dr. James Jackson, in which the disease was also at the cardiac orifice; it was not confined, as in the present case, to that locality, but extended along the lower curvature.

Climate of Pau. — DR. PARKS gave an interesting account of his experience of the climate of Pau, and the inferences which a residence there had caused him to form with regard to its value as a resort for invalids in winter. He illustrated his remarks by diagrams on the blackboard, showing the formation of the surrounding country, to which Pau owes the peculiarities of its climate. It is situated on a spur of the Pyrenees, and is entirely sheltered from the north, south, and east winds, the only wind to which it is exposed being the west, which is never very violent, and always mild in temperature, from the fact of its having come over the Bay of Biscay. Much rain falls, but nevertheless the climate is not damp, and it is rare that during some part of a day a walk in the open air cannot be taken. The climate of Pau may be said to be the exact reverse of that of the Riviera (Mentone, Nice, etc.), as while the former is sedative, still, and moist, though not damp, the latter is stimulating, windy, and dry. And it is only from a proper appreciation of these differences that a valid opinion can be formed as to the relative advantages of the two places as a residence in any given case. The sedative character of the climate of Pau was shown in many ways; it was said that the pulse of the natives was slower, on an average, than that of the inhabitants of other parts of France, and the people are decidedly slow in their temperament.

He considered this a matter of great importance in giving advice as to a winter resort, as he regarded the special peculiarities of the climate of Pau as potent for good or evil. Those cases that require stimulating should decidedly be sent to Mentone or Nice, but where a sedative influence is wanted, Pau is very desirable. He referred to a case of a young gentleman whose circulation

was very excitable, who was sent to Mentone, he having symptoms of phthisis. While there he had repeated hæmorrhages, and finally changed to Pau; the result was that the hæmorrhages ceased entirely, and he is now comparatively well.

DECEMBER 27, 1875. *Cystic Adenoma of the Thyroid; Excision; Cure.* — DR. JOHN HOMANS read the following paper and showed the specimens: —

"In reporting the following case I do not wish to be considered as recommending excision as a rule in the treatment of thyroid growths. I only wish to show three tumors coming from a case in which excision was the only possible means of cure, and in which feebleness and hoarseness of the voice, accompanied or caused by paralysis of one vocal cord, were prominent symptoms.

"Various plans of local treatment of tumors of the thyroid have been successful, namely, cauterization, excision, incision, injection, and the introduction of a seton; each case must, however, be judged on its merits and treated according to its peculiarities, or let alone.

"The literature of this disease is abundant; excellent articles have been written in Switzerland and in Germany, and the magazines of the last fifteen years in this country and in England contain accounts of many interesting cases.

"The patient from whom these growths were removed was a healthy, well-made single woman, a native of Prince Edward's Island, thirty-two years old. Her father was a white man and her mother a mulatto. She lived in her birthplace till she was twenty years old, and then came to Boston, where she has lived during the last twelve years. She first noticed the tumor in the left side of her neck eight years ago, and the one in the front of her neck five years ago. These tumors have grown slowly, without causing much pain, and only within the last two years any dyspnoea. She has not been conscious that her voice has been hoarse. Iodine was applied to the neck for a short time eight years ago, and within the last year ointments of iodine and other absorbents have been faithfully used, and internal treatment with iodide of potassium has been followed for several months, but without effect.

"The following description of the external appearances is taken from the records of the Carney Hospital, where she was admitted November 19, 1875. 'On inspection the neck seems fuller than normal, a prominent tumor is seen on the left side, extending from the region of the cricoid cartilage outwards and downwards beneath the left sterno-mastoid muscle into the posterior triangle of the neck. Another tumor is seen in the tracheal region, situated somewhat to the right of the median line, and only slightly pushing forward the skin. On palpation both these tumors are found to be solid, and to extend deeper and to be much more bulky than would appear to the sight. The extremity of neither tumor can be reached by the finger, as one extends beneath the sternum and the other beneath the clavicle. Both tumors are somewhat movable, and no connection is noticed between them. The outline of the trachea cannot be determined, and has been pushed to the right or is covered by the tracheal tumor, which rises and falls when the patient swallows.'

"I determined to remove the tracheal tumor first, and later, when the patient had entirely recovered, to remove the tumor lying beneath the sternomastoid, if the first operation should have been sufficiently encouraging. On November 21st, after etherization, an incision was made through the skin and muscles from the upper tracheal region to the sternum. The tumor was found to be covered with a very delicate membrane composed largely of delicately-walled veins, and the dissection was continued as much as possible with the fingers and handle of the knife, the blade being used occasionally. The tumor was sausage-shaped and somewhat lobulated, about one and three fourths inches in diameter at its thickest part, and three inches long; it was adherent to the trachea, which it had pushed considerably into the right side of the neck and had somewhat compressed; its lower extremity passed downwards behind the sternum. A nerve running over the tumor parallel to the trachea was left uninjured. Many ligatures were applied, and the deep fascial attachment was tied before the tumor was cut away. Examination of the tumor by Dr. Cutler showed it to be thyroid, and in its interior was a cretaceous mass; the newest portion of the growth was evidently the lower apex. Recovery from etherization was accompanied by great excitement and restlessness, and for several days the patient complained of pain and difficulty in swallowing; at the end of ten days, however, the ligatures had all come away, the wound was nearly healed, and the patient was up and about the ward. At the suggestion of Dr. Cutler, a laryngoscopic examination was made by him on December 10th, and the left vocal cord was seen to remain perfectly still during respiration and vocalization. Dr. Langmaid also examined the larynx, and made the following report: 'Voice low in pitch, somewhat hoarse, and quite feeble. Arytenoids changed in appearance from swelling of mucous membrane covering them. Color of vocal cords normal, or slightly redder than normal. Right cord moves freely in vocalization and respiration. Left cord remains immovable in these acts, a little withdrawn from the median line. Condition: paralysis of abductors and adductors. Probable cause: injury to recurrent laryngeal nerve from pressure of tumor removed from region of thyroid gland.'

"I regret that the interior of the larynx was not examined when the patient first entered the hospital, but I presume that the vocal cord had been paralyzed for some time. On December 15th, after the patient had fully regained her health, and had been out walking several times, the second operation was performed. An incision about three and a half inches long was made in the course of the fibres of the left sternomastoid, at right angles to the long diameter of the tumor and over its most prominent portion; the dissection was slow, as in the first operation. The envelopes of the tumor bled very freely when torn or cut, and were very friable. The extremity of the tumor extended beneath the outer part of the clavicle, and was gradually pulled upwards with the fingers and drawn out of the wound. All vessels that could be recognized and all vascular-looking portions of fascia were secured in ligatures before division. When the central attachment (resembling somewhat the central tendon of a bird's gizzard) was reached, another lobe of the tumor was revealed beneath. This also was slowly removed, and there was a feeling

of relief when the hæmorrhage, which was more free than before, was at length stopped by ligatures. For a few days the pulse ran high and but little food was taken; the use of the catheter was also necessary. There has been an offensive discharge mixed with small shreddy masses of tissue until December 24th, when all the ligatures and several long sloughs came away; now the patient is out of bed and the wound nearly healed. I have reserved making an incision in the larger of these tumors until I could do so in the presence of the society. The tumor may be roughly described as sausage-shaped, about four inches long by two thick. You see that, on section, it presents a colloid appearance, such as is commonly seen in bronchoceles. The two other tumors are more cystic, and the tracheal one, containing cretaceous matter, is probably the oldest. The dark-brown masses are pigmentary remains of former hæmorrhages. The larger of these three growths is probably what Paget would call an accessory thyroid tumor. 'These growths of new gland tissue may appear not only in the substance of the enlarging thyroid, but externally to and detached from the gland. Such outlying masses of thyroid gland are not rare near bronchoceles, lying by them like the little spleens one sees near the larger mass. Their history is merged in that of bronchoceles, with which they are usually associated, whether imbedded as distinct masses in the enlarged gland, or lying close to it but discontinuous.'¹

"Microscopically² these tumors consist of connective-tissue capsules filled more or less with round pale cells, or pigmentary débris, crystals of cholesterine, and of oxalate of lime. To-day (December 27th) Dr. Langmaid examined the larynx, and reports as follows: 'Left chord in phonation approaches the median line; in inspiration there is decided movement outwards, although not so much as is normal. The voice is decidedly improved.' I presume that the paralysis will disappear in time, since much improvement has taken place already."³

Aneurism of the Aorta. — DR. LYMAN reported the case and showed the specimen. I. T., thirty-five years old, a laborer, unmarried, entered the City Hospital May 9th. The record states that his general health had been good. One year ago he had a stone fall on him, breaking three ribs and the left arm. Six months later, while using a twenty-pound sledge-hammer, his foot slipped, and he felt something give way in his chest, "saw stars," "felt dizzy," etc. The pain in the chest compelled him to relinquish work during the fortnight before his admission to the hospital. At the time of his entrance the general

¹ Bryant's Surgery, page 709.

² The gross appearance of a thyroid tumor may be seen in Figure 133 of Druitt's Surgery, and the microscopical appearance in Figure 133 of Billroth's Surgical Pathology.

³ Since this case was read before the society, Dr. Langmaid, under date of January 6, 1876, reports the condition of the larynx as follows: —

DEAR DOCTOR, — I examined the patient's throat yesterday. You will recollect that the left cord moved somewhat during forced inspiration, but was not wholly abducted when we made the last examination. Now it retreats so far as to be almost entirely concealed by the ventricular band above. The swelling of the mucous membrane about the vestibule of the larynx which existed at the first examination has entirely disappeared; in fact, the larynx is quite normal in every way. This corresponds with the respiration and breathing. This laryngeal feature of the case is quite remarkable.

Yours truly,

S. W. LANGMAID.

functions were well performed. Deglutition caused pain. A pulsating prominence two and one half inches in diameter was felt one and one half inches below the sternal end of the clavicle, slightly redder than the surrounding skin. The cardiac impulse was more marked at this spot than elsewhere. Sharp and almost constant pain extended from it to the shoulder-blade. The pulse in the left arm was 80, occasionally intermitting and small; in the right arm it was 78, also intermitting, but stronger than in the left. During the previous three weeks he had had so much pain in swallowing that he had gone to work without his breakfast. The cardiac impulse was two and one half inches below the nipple, the second sound was accented, the sounds at the base were clear and heard loudly over the prominence. Until the present attack he had never been troubled with cough, dyspnœa, headache, muscæ volitantes, or rheumatism; he had occasional palpitation.

May 14th. The murmur was heard with the first sound to the right of the sternum, just below the line of the nipple.

May 18th. When erect the patient complains of pain and dropping of the left shoulder. The action of the heart is perfectly quiet, steady, and regular. No murmur at the apex. At the base the sounds merge into each other and are heard loudly through the pulsating prominence.

May 25th. The patient complains of pain in the left arm and of loss of appetite.

June 8th. Prominence rather less. The patient thinks it grows smaller when he is at rest, and increases when he is moving about.

June 13th. The patient left hospital. Pain still continuing.

September 5th. Reëntered. For two weeks after leaving the hospital he was "comfortable," he was then run away with by a pair of horses, and has since had cough and dyspnœa. Pulse 96, weak. Complaints of pain, especially from sternum through left shoulder. Has dry, persistent cough, and frequent attacks of dyspnœa; difficulty in swallowing solid food, none with liquids. Tumor now raised one inch above level, and five inches in diameter. No aneurismal bruit. Apex beat in normal situation. Sibilant and sonorous râles are heard on forced inspiration, and when the chest is expanded the air seems to rush in with force.

September 15th. Protrusion of tumor between second and third ribs quite tender.

September 27th. The patient complains of stinging, burning pain over the lower third of the brachial artery.

October 13th. Prolonged systolic murmur, heart pulsations irregular, impulse strong, pulse feeble. Patient sufficiently strong to do some light duty as nurse. Respiration extremely feeble over whole left lung. Tumor now extends from inner end of clavicle four inches downward; sternum elevated at its centre the tumor extending five inches to the left.

November 3d. Prominence increasing.

November 27th. Tumor now measures six and one fourth inches from above downward. During past four days the patient has expectorated a mouthful of blood at a time; he thinks in all from one half a pint to a pint.

December 25th. Cough and dyspnœa are becoming urgent, apparently from œdema of lung.

January 1st. Patient died from asphyxia.

Autopsy. — Both lungs adherent at apices, left lung infiltrated with miliary tubercles. There were many small cavities filled with caseous matter or with pus scattered through the upper part of lungs, and the bronchi contained much purulent fluid. Left lung had been pressed upon at the roots by the aneurism, and was anæmic.

Pericardium contained considerable more serum than usual. Heart healthy. About one half or three fourths of an inch above the aortic valves began the opening into an aneurism. The orifice was about three inches in diameter. The sac contained about a pint or twenty ounces by estimate, had pushed forward the cartilages of the third and fourth ribs on the left side, was partly filled with soft clots, and contained considerable fibrin.

The ribs and sternum were not eaten through. Liver and spleen slightly larger than usual, normal. The kidneys seemed slightly granular; the capsule brought away some of the cortical substance.

In the brain on right side of the longitudinal fissure just anterior to the vertex were three small calcareous plates about one sixteenth of an inch in diameter, adhering to pia mater. In or beneath the pia mater, along course of vessels, were numerous white bodies resembling Pacchionian bodies. On the anterior surface of the spinal pia mater were several calcareous plates.

MEDICAL EDUCATION.

It is a hopeful sign of the times that at least one man has been found bold enough to speak the whole truth in regard to medical education. Although the sympathy expressed over the recent efforts at reform made in this city appeared to be genuine and wide-spread, the annual announcements of this year, as we pointed out at the time, showed that no effort in this direction had been made by any of our medical schools. The same pretentious display of graduating classes, the same extravagant statement of advantages, which characterized the documents issued by them, showed, perhaps, more strikingly than anything else could, how far removed from a condition favorable to reform most of our prominent schools still continue to be.

The desire for display rather than work is indeed one of the natural tendencies of the old system, and manifests itself both in the preliminary flourish of trumpets and in the final scene at the commencement exercises in some "academy of music." Another characteristic feature is the growing fashion of attempting to crowd the two prescribed courses of lectures into the shortest possible space of time. The Long Island Medical College has the honor, we believe, of first attempting the experiment of producing a full-blown doctor after nine consecutive months of academic work. The "enviable history" of this college, says the announcement of the Kentucky School of Medicine, has induced the faculty of that school to do likewise. Curiously enough, the professors of the latter school, according to the *Louisville Medical News*, are with one or two exceptions professors also in the Louisville Medical College, which gives its instruction at the usual winter season. We also learn from the

same journal that the University of Virginia gives only a didactic course, and allows students to receive a degree at the end of nine months' work. For clinical experience it refers the student to the larger cities. Notwithstanding this discouraging condition of affairs, the article of Dr. H. C. Wood, Jr., in a recent number of *Lippincott's Magazine*, gives encouragement to hope that a class of men exists in the profession, as yet small, perhaps, but daily growing larger, which measures these evils with unprejudiced eyes, and is fully alive to the necessity of a practical revolution in our system.

The difficulties to be contended with are undoubtedly great; the customs of a century are not easily swept away, the power and patronage wielded by a few men are not to be surrendered without a struggle. "Spread-eagleism" in medicine is, we fear, still a reality, although the class of men who uphold the system simply because it is of American origin we believe to be fast dying out. It is not to be wondered at that many leaders shrink from the undertaking. The handsome salary, the old stock of lectures which have done many a year's work to crowded lecture-rooms, must give place to small classes and painstaking instruction or laboratory work. The professor gladly leaves these castles in the air for younger heads to dream about.

It is no argument in favor of the old system that many distinguished men have flourished under it. They have risen to eminence in spite of an education the requirements of which are so few that large numbers of men enjoy the privileges of a respectable title with no better qualifications than many a flourishing charlatan. The system may have been suited to the early years of the republic, but has long since outlived its era of usefulness. The rising men of the profession feel convinced of this fact, and a change will come inevitably, sooner or later. Why postpone the day? Now is certainly a most appropriate time to turn over a new leaf in our history. The experiment having been tried and proved a success, a general movement in reform might well be inaugurated in the birthplace of medical education in this country. We are surprised that the University of Pennsylvania, with its past history, with the material of which its faculty is composed, with the vigorous support lately received from a generous public, should still hesitate.

Our contemporary, the *Philadelphia Medical Times*, has been much criticised, we understand, for not supporting those schools in the interests of which it was said to have been originally published. In our opinion that journal has been their true friend. It has pointed out the only true pathway, a seemingly hard one to pursue, we doubt not, but all others lead surely to destruction.

MEDICAL NOTES.

— Another death from chloroform has recently occurred in England, the patient being under the care of Mr. Chesshire, a surgeon of Birmingham. The circumstances were such as are familiar to those who watch the records of anaesthesia in countries where ether has been superseded by chloroform. The condition of the patient offered no counter-indication to the use of chloroform; the operation (extirpation of an eyeball) was a slight one, involving

by itself no danger to life; the dose of chloroform used was small, namely, forty or fifty drops administered on a towel, and the same dose was repeated when the effects of the first proved insufficient. The first dose rendered the patient only "semi-unconscious;" the second caused "failure of the pulse," followed by death, notwithstanding attempts to restore vitality by lowering the head and practicing artificial respiration.

The Lancet mildly observes that "it is remarkable how small a quantity of chloroform proved fatal in this case; probably not more than two drachms were used altogether, and every precaution was taken in the administration of the drug, and yet death resulted." Beyond this expression of dispassionate scientific wonder at the powerful effects thus produced by chloroform, *The Lancet* makes no comment upon this case, of which the moral remains unnoticed.

—The members of the British Medical Association number 6230. Of these, 5220 have their residence in the country, and 1010 reside in the metropolitan district. The *British Medical Journal* has a circulation of 7500 copies weekly.

—The following account of the visit of Professor Depaul to Brazil, as published in the *Paris Figaro*, is contained in the *Medical Times and Gazette* of December 11, 1875. Professor Depaul has recently returned from Brazil, whither he went to attend the imperial princess, the Countess d'Eu, in her confinement. After nine years of sterile married life, the countess, the daughter of the Emperor of the Brazils, became pregnant after consulting Professor Depaul in Paris, and following the treatment he recommended; but the child was still-born. She became pregnant again, and this time the emperor solicited Depaul to come out himself and conduct the delivery, and he at last was persuaded to go. On his arrival at Rio Janeiro he met with a most frigid reception from almost every one except the immediate attendants of the princess. The newspapers were against him, and the native physicians gave him the cold shoulder. Although he personally visited the medical men connected with the court, on the day of the accouchement he found himself at the bedside of the princess alone and without assistance. Only the Count d'Eu was unwearied in his devoted attention to his wife. After a thirteen hours' labor, which had to be ended with the forceps, a baby weighing twelve pounds (livres) was at last brought into the world; but for an hour it was doubtful whether it would survive, and it was only after artificial respiration and other methods had been vigorously tried that it gave signs of life. It is now a healthy child. The most curious and amusing feature about Dr. Depaul's visit was the revulsion of public opinion in his favor when the successful result of his visit became known. The papers praised him, his *compères* congratulated him, and the academies and scientific bodies sent him crowns and addresses; he was invited to banquets, and was *fêted* in a wonderful way. "After the event," says Depaul, "my room was never empty from morning till night, and I was obliged, in spite of a determination to the contrary, to give consultations. In less than eight days fifteen thousand francs' worth of piasters were laid on my table as fees." Professor Depaul has certainly good reason to be satisfied with his trip across the ocean. *Non cuivis homini continget adire Brazilium!*

— In view of the high temperature which has prevailed during the holiday season, the following upon "seasonable" weather, which we take from *The British Medical Journal* of December 18, 1875, is of interest. Until the stubborn figures of the registrar-general rendered it no longer tenable, it was a favorite theory that seasonable weather was good for mankind. By seasonable weather was meant hot summers and cold winters. It must be acknowledged that it is a somewhat unwelcome discovery that cold, wet summers and warm, muggy winters are not only innocuous, but actually favorable to the public health; whereas fine, hot summers and bracing, cold winters invariably produce excessive rates of mortality. In England and Wales the excess of deaths during a hot summer, as compared with a cold one, is to be numbered by tens of thousands, consisting for the most part of infants. The excess of deaths due to a long and severe winter, like that of 1874-75, reached a far more formidable total, and is shared, though unequally, by persons of all ages. The effect of cold upon mortality increases with the ages of those exposed to its influence, or, in other words, the power of resistance to cold declines with age. Though the conclusion is inevitable that, as the thermometer falls below a certain point, so surely will the rate of mortality within a brief period show a corresponding increase, we at present know neither the exact point at which the temperature becomes too low for human health, nor the exact period which elapses between the incidence of the low temperature and the commencement of its effects upon the death-rate.

— Some practical remarks concerning the use of atropia in cases of opium poisoning are contained in a lecture on the treatment of opium poisoning by Prof. H. C. Wood, published in the *Philadelphia Medical Times* of December 25, 1875.

Dr. Wood says that atropia should be employed not as an antidote, but as a remedy when the respiration is failing, precisely as alcohol is used when the circulation is failing. It is a powerful stimulant to the respiratory centres. If it be administered in small doses when the breathing is very slow, the respirations are increased very remarkably in frequency, and the carbonic acid being thrown off from the blood the patient arouses, restored to consciousness not by the direct but by the indirect action of the remedy upon the nerve-centres. Use the alkaloid hypodermically, and in very small repeated doses. Belladonna poisoning has often been produced by the improper use of atropia. It is commonly stated that the pupils should be the guide, the quantity given being regulated by the amount of the dilatation produced. It is not proper to rely solely or chiefly on the state of the pupils. Inasmuch as the atropia is given to stimulate the respiration, its influence on that function should direct us in its administration. Suppose we had a patient who was in the last stage of opium-poisoning, with slow respirations, — down to four or five in the minute, — and had exhibited one thirtieth of a grain of atropia hypodermically. If in fifteen minutes or half an hour the respirations had risen to ten, we should know that the desired end was being accomplished, and as long as the breathing continued to increase in rapidity we should give no more of the remedy; but if the respirations began to grow less frequent, it would be proper to exhibit the one sixtieth of a grain, and repeat it every half-hour until the breath-

ing showed the effect, or the dilatation of the pupil warned us that we were approaching the danger-point. The golden rule is, *Give the least possible quantity that will produce the required effect.*

BOSTON CITY HOSPITAL.

SURGICAL CLINIC.

BY GEORGE W. GAY, M. D.

Compound and Comminuted Fracture of the Tibia; Recovery. (Service of Dr. Gay.) — Michael D., aged thirty, a temperate man, was injured September 27, 1875, by a cask of "raw hides" falling upon his left leg, producing a severe compound fracture of the tibia. He was brought immediately to the hospital. About three inches above the internal malleolus was a wound an inch long, communicating with the broken tibia. The tissues were severely bruised. A probe passed downwards to the sole of the foot and upwards to the middle of the leg. The tibia was shattered into several fragments. The hemorrhage was moderate, and the tibial vessels were apparently uninjured.

On account of the extensive comminution of the tibia in the vicinity of the ankle-joint, and great laceration of the soft parts, amputation was advised by the attending surgeons in consultation. The patient refused his consent to an amputation, preferring to take his chances with conservative treatment.

The wound was then enlarged, and the looser fragments of bone were removed. Only the outer wall of the shaft of the tibia was left in its place, for about four inches of its lower portion. The ankle-joint was probably not opened, although the fracture must have extended close to it. The fibula was denuded, but not broken.

The leg was allowed to rest in a fracture-box, with just padding enough to keep it steady. Cold lotions were applied for a few days until the inflammation became developed, when an opiate lotion was substituted.

Ten days after the patient's entrance an abscess formed over the fibula which required an incision. This gave a free channel through the leg, and it was thoroughly syringed out three times a day with chlorinated soda wash.

For a few days the patient was chilly and feverish; but with this exception he went on well and made a good recovery. The wounds contracted, the large gap in the tibia became filled, and the leg was firm and strong at the end of about six weeks. There was a little necrosis at one time, but it gave no trouble. The wounds were entirely healed in eleven weeks, and the man could bear considerable weight upon the leg. There was no deformity, and as the foot had been kept at right angles to the leg during the treatment, he had no trouble in putting it under him and using it to the best advantage immediately. There was necessarily some impairment of motion in the ankle-joint, which will probably disappear in time.

As a rule, compound fractures with much comminution of the bone have done better at the City Hospital when treated by amputation rather than by conservative measures; but as this man refused amputation he was treated in

the ordinary, common-sense manner, and got well. We ascribe his recovery principally to his healthy constitution and to the favorable hygienic condition of the hospital. Whether the leg will ever get strong enough to allow the patient to follow his business as a laborer remains to be seen.

Compound Fracture of the Os Calcis, and Simple Fracture of the Leg ; Recovery. (Service of Dr. Gay.) — A. B., a carpenter, forty-one years of age, was admitted to the hospital October 20, 1875. He had dropped or jumped from a falling staging, a distance of about thirty feet. He first struck upon his feet, and then fell to the ground. There was found to be a compound fracture of the os calcis of the left foot. A small opening on the inner side of the foot allowed the probe to pass in between the fragments. The soft tissues in the vicinity of the fracture were somewhat bruised, but there was very little hæmorrhage. The right tibia was broken at the junction of the middle and the upper third, and the fibula at the junction of the middle and the lower third. The patient also had several contusions upon the head.

Each leg was placed in a fracture-box, and evaporating lotions were applied. The wound on the foot healed without any suppuration whatever. The right leg became enormously swollen, and covered with large blebs; but fortunately the fragments did not protrude through the skin. The patient was delirious for a few days, and made strong efforts to get out of bed. He also had a small bed-sore. With these exceptions he went on very favorably. As soon as the swelling in the leg subsided, and the skin had become sound and some degree of union had taken place, a dextrine bandage was applied to each leg. This allowed the patient to turn in any direction while in bed, and also to sit up a part of the time. He was discharged in eight weeks. He could then walk very well with the aid of crutches. The fractures were firmly united without deformity, and there was every prospect of a complete recovery.

ABOUT CORONERS.

MESSRS. EDITORS, — Would it not be well to make arrangements for petitioning the legislature to make a review of the laws about coroners' inquests and to effect a change, if found expedient? An article in your journal led me to look into the law upon the subject, and into the names of those who hold the office in this County of Suffolk. I find in the directory for 1875 the names of two special coroners, so called, and of twenty-eight coroners in the city proper, one in Jamaica Plain, one in Brighton, two in Charlestown, three in Chelsea, and one in Neponset. Since the publication of the last directory, a number of others have been appointed. To every member of the medical profession who has been frequently called before coroners' juries the action of some of these officers has seemed absurd. The juries called by coroners are frequently made up of the same men, oftentimes ignorant men, and very commonly indeed the conversation carried on in the presence of witnesses, by the jurymen before coming to order, is not what it should be. Men have been appointed to the office who have been charged with criminal acts. Some of them in their decisions have been guilty of the absurdity of deciding upon the

cause of death in cases where no examination of the dead bodies had been made, other than "viewing." "Apoplexy" and "disease of the heart" have been frequently decided upon, when an examination of the body might have shown murder or suicide to have been the cause. In one case within a few months the papers reported "*nearly an ounce of chloroform* as having been taken into the stomach, from the effects of which death followed;" and to this is added the absurd statement that "there was no evidence tending to show that suicide was intended or that any irregularity existed anywhere in connection with the case." The absurdity of such verdicts is evident to any one who has tried to swallow even the small quantity of five drops of chloroform, no matter how carefully mixed with other articles.

Now, Messrs. Editors, in what way can the laws concerning coroners be brought up for examination by the legislature? Would a petition from one of our district societies be heeded? or one from the council? How should the subject be approached? Would it be of any use to move in the matter?

Yours respectfully,

ONE WHO HAS BEEN A WITNESS.

THE POMEROY CASE AGAIN.

MESSRS. EDITORS,—I was unable to take part in the discussion of Dr. Folsom's interesting paper on the Pomeroy case, read before the Suffolk District Medical Society, and published in the JOURNAL for December 30th. I therefore ask for space to consider one or two points in it. Of the five forms of mental disease mentioned as possibly existing, I had never heard of delusional insanity in this connection, and I think no good evidence of epileptiform insanity has been advanced. Dr. Folsom agrees with all the physicians who have expressed an opinion that Pomeroy is weak-minded, and he says he uses the term as "synonymous with moral imbecility," so that on this third form everybody is agreed.

Now, as to the possibility of the existence, two and four years ago, of attacks of moral *insanity*. Dr. Folsom says that Pomeroy does not deny that he knows the acts he is said to have committed were wrong, as if this were the proper test. This test of *knowing*, is one applied to the intellect, which is presumed to be sound, and not to the moral sense, which is supposed to be at fault. The question is, Did he at the time of his acts *feel* that he was doing wrong, and was he able to resist the impulse which possessed him? and also, Did this impulse arise from a healthy or from a disordered state of the brain?

These are delicate questions and difficult of solution, but considering the existence of a certain degree of moral imbecility, and the presence of the age of puberty, when sensual images and impulses of all kinds tyrannize over the brain, Dr. Folsom would probably agree with Maudsley that this "constitutes a frame of mind favorable to the action of other causes of mental derangement." Suppose, then, that a cause existed in the habit of excessive self-abuse, are not all the circumstances propitious for an outbreak of moral insanity, to be shown, not in intellectual disorder, but in vicious or outrageous acts? And when at this time acts of rare and unnatural cruelty occur, cul-

minating in murder, is there not room for a strong suspicion that such an outbreak did take place? Neither is premeditation nor self-control under observation, as cited by Dr. Folsom, an argument against this suspicion, for are not most suicides arising from simple melancholia, which is the most common form of moral insanity, deliberately planned and executed?

Dr. Folsom makes too little account, in my opinion, of the fifth form, insanity from masturbation. As the sole cause of insanity, self-abuse is no doubt rare; but as an exciting cause, and an aggravating concomitant, it is quite common. He describes merely the symptoms of dementia from this cause, and passes over entirely that form of mania which I referred to in my paper published in the transactions of the Suffolk District Medical Society in the JOURNAL for November 4th. Perhaps he has never seen this form of disease, as I have met with only a score or so of cases, out of some three or four thousand insane patients examined. Maudsley, however, whom I quote only because Dr. Folsom seems to rely on his authority, says,¹ "The habit of self-abuse notably gives rise to a particular and disagreeable form of insanity characterized by intense self-feeling and conceit, by extreme perversion of feeling and corresponding derangements of thought, in the earlier stages; and later by failure of intelligence, nocturnal hallucinations, and suicidal or homicidal propensities."

In regard to Pomeroy's responsibility, I have nothing to say except that in view of the above facts I would give him the benefit of an honest doubt, and imprison him for life, rather than hang him. Dr. Folsom it seems, would hang him, although he says, "I do not think he ever meant to murder."

Will you please print the following case in addition to those I presented in my paper before mentioned?

"Under the heading of a 'Psychological Riddle,' the *Neue Freie Presse* of Vienna reports a horrible affair which recently occurred near the village of Trighs, in the District of Dobersberg. The story is as follows:—

"A little boy twelve years old was playing in a field with two little girls, when one of the latter, named Antonia Durneder, lay down and went to sleep. The boy, whose name was Johann Fraisl, went up to the child and contemplated her for some time, during which a hideous thought arose in his mind. He carefully collected the best materials at hand for a large bonfire, arranged these over the body of the sleeper, and set fire to the structure. The flames immediately rose high above the unfortunate child, and when the other little girl saw the awful sight, she screamed to the young murderer to put out the fire. But Johann took pleasure in the spectacle, and replied, "No, let Antonia burn; she will go to the angels." The wind soon scattered the ashes of the burned child, and her despairing parents found nothing remaining of her but some calcined bones. The boy is charged with the crime before the District Court of Dobersberg. Meantime, the general feeling on the subject is one of utter bewilderment, as there is no evidence of the existence on the part of the little miscreant of any hatred or ill-will toward his playmate, and he can give no plausible ground whatever for his horrible conduct."

THEO. W. FISHER.

¹ Physiology and Pathology of Mind, page 248.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JAN. 1, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week
New York	1,060,000	556	27
Philadelphia	800,000	362	24
Brooklyn	500,000	254	26
Chicago	400,000	143	18
Boston	342,000	180	27
Cincinnati	260,000		
Providence	100,700	46	24
Worcester	50,000	21	22
Lowell	50,000	15	16
Cambridge	48,000	24	26
Fall River	45,000	17	19
Lawrence	35,000	13	19
Lynn	33,000	12	19
Springfield	31,000	9	15
Salem	26,000	10	20

Normal Death-Rate, 17 per 1000.

Messrs. Editors. — There should be a new item or clause in our rules of professional etiquette, for the benefit of certain men in office. To explain: a short time ago it became necessary to send a patient of mine, who lived near my house, to the insane asylum. His wife called on me on her way to Pemberton Square, and I arranged to be at home at about the time when I thought she would return. She was told by the doctor that it was necessary for him to go to the hospital at once, and that he would go right up and examine him, taking another doctor along, as it was necessary to have two signatures. The wife asked if she could not have her family physician for one of the doctors, as he was near by, and she would call and tell him on her way home. She was told that there was no need of that, that there might be some delay, and there was a doctor right there who could go as well as not. The lady passed by my door and did not call, and my patient was sent away under the signatures of two strangers. The amendment wanted is as follows: "Though some physicians have rights, others are not thereby without theirs; and though some have a little learning, others are not of necessity fools." M. M. S. S.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held on Monday evening next, at eight o'clock, at the hall in Temple Place. Reader, Dr. Boies. Subject, Broken Skulls. EDWARD WIGGLESWORTH, JR., Secretary.

ERRATUM. — In the JOURNAL for December 30, page 774, last line, for "intense" read *retarded*.

BOOKS AND FAMILIETS RECEIVED. — Extra-Uterine Pregnancy. By John S. Parry, M. D. Philadelphia: Henry C. Lea, 1876.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M. D. Third Edition. Philadelphia: Henry C. Lea, 1876.

Transactions of the Michigan State Medical Society for 1875. Lansing, 1875.

Atlas to Anatomy. By George Brown, M. R. C. S. London: Baillière, Tindall, and Cox, 1876. (From the publishers.)

Transactions of the American Semiological Association for 1875. Volume I. New York: S. W. Green, 1875.

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THORACIC ANEURISM TREATED BY ELECTROLYSIS. WITH REMARKS THEREUPON.

BY HENRY I. BOWDITCH, M. D.

T. A. S., forty years old, was by occupation a chief engineer in the United States navy. His father died of inflamed bowels, his mother of carcinoma uteri. In 1851 he entered the United States navy. In general he had been tolerably well, though never very strong; he had never had any long illness, and did not remember ever having severely strained himself. Previously to calling on me he had for three or four years had a little palpitation. In 1869, while at Norfolk, Va., he felt "run down" and generally unwell. A widower, he married a young wife in January, 1872. A cough appeared in the following spring and lasted about ten days, and then suddenly disappeared. He raised during these days, only a little froth, without blood at any time; but he could sleep only on his right side, since lying on the left side caused cough. During the following summer he considered himself as well as usual. He was able to walk as freely as ever until pulmonary symptoms reappeared three weeks before he called on me. At that time, one morning, when dressing, in the act of straightening his body in order to comb his hair, he was suddenly seized with a violent paroxysm of coughing, which could be relieved by gently bending forward his body; but it was renewed when he placed himself in an erect posture. This condition of things continued ten days, during which he was quite exhausted by the cough; it caused restless nights, and compelled him to lie upon the right side. His appetite, however, continued. He had no hectic. In about ten days the cough was much lessened; but meanwhile, as he expressed himself, "he had lost some flesh" and "all his strength," and "his wind was wholly gone." His wife had heard a kind of "clicking" in the throat, apparently above the collar-bone. He had given up all duty for ten days.

At his first visit to my study he was found to be a well-formed man with evident dyspnoea, not of the severest kind. He had a hard, dry cough. His pulse was 84 and not peculiar. He reported that usually he felt the best in the afternoon.

Physical Exploration. The superficial veins of neck and chest were distended. A distinct rounded prominence was seen between the right clavicle and the fourth rib. The intercostal spaces, however, were visible. The swelling was most prominent at the second rib, and at that part there was a distinct impulse with each motion of the heart. Semi-bronchial respiration was noted there, without râle. The whole of the prominence was flat on percussion, most so at the centre, and generally a little less sound in the right breast than in the left. Nothing peculiar about the heart. Save in the spot above named the lungs seemed well, front and back. Perhaps the right back had a little less sound on percussion than the left. Laryngoscopic and sphygmographic examinations revealed nothing definitely diagnostic. It appeared to me to be evidently a case of aortic aneurism, projecting from the arch towards the front and pushing forward the ribs. The limited locality in which the impulse was felt, namely, a space about two inches long in the second intercostal space, and the fact that only a very small portion of the lung seemed pressed upon, made the case not inappropriate for the trial of electrolysis. The patient had tried various remedies under other physicians, but had obtained no relief.

November 12th. His nights had been troubled by dyspnœa, but he had been more easy when lying in a semi-recumbent position. Pulse 72, smaller, a little irregular, equal in both wrists. Mind clear and calm in anticipation of the operation, which he had consented to, as he felt that it afforded the only possible chance of relief or cure. It was upon that ground alone that I advised the operation.

Drs. J. Collins Warren and J. J. Putnam consented to aid me. Dr. Warren introduced three steel needles. I chose the softest and most central part of the tumor as the spot for their introduction. The needles were covered with varnish save at the very points. All were within half an inch from one another, and nearly parallel. They passed readily in about an inch and a half, and the extremities farthest from the chest undulated very visibly and undoubtedly under the influence of the aortic current. To these needles, which represented the positive pole, Dr. Putnam attached twelve and, after some minutes, fifteen cells of the Störer battery, increasing the current gradually from zero. The introduction of the needles caused no pain. At the negative pole was a large pad; it was placed on the left breast on a part corresponding to that in which the needles were placed in the right. A slight pricking sensation was caused under this pad, but no real pain or other discomfort was felt during the fourteen minutes the operation was continued, except that towards the last the patient had pain low in the left back of the chest. Three minutes after this, pain began (fourteen and one half minutes from the commencement of the current), the pulse rose to 92. The needles were still swaying strongly backward and for-

ward as at the beginning of the operation. Soon the patient became pale, and looked faint; the pulse failed and the hands were cold; evidently serious results were threatening. The needles were immediately withdrawn. Only a drop of sero-sanguinolent fluid escaped at each minute aperture. The pulse was lost a few moments at the wrist. The patient was laid flat in bed and was soon relieved from these untoward symptoms. The needles were all discolored and one was corroded. The patient soon recovered wholly his quiet of body and calmness of mind. He was ordered to remain perfectly at rest; to take beef-tea and milk, with a little brandy, for diet. Some strips of adhesive plaster were applied over the tumor.

In a few hours one could not have recognized that the operation had been performed, except that in regard to every symptom the patient had greater comfort than he had had for several days before the operation.

November 13th. I found that the relief had continued. The pulse, by report, had been about 84. The patient had had no uncomfortable symptom, only a slight local soreness where the needles were introduced.

November 14th. Much the same as the day before, although he had required the paregoric during the night because of his restlessness. He had perceived nothing materially different in his sensations since the operation. His aspect was that of comfort rather than of distress, and his respiration seemed easy. Pulse 86. The tumor was examined through the adhesive plaster; it had a hard, solid feel, very different from the soft pulsation observed before the operation.

November 15th. Patient more restless and having some dyspnoea: opiates needed twice. At the time of the visit he was lying on his right side. Motion caused pain in front and sometimes in the back of the chest. Pulse 72, quiet.

November 17th. He was sitting up, looking easy. The previous night he had been almost able to lie on his back. Slight sonorous râle was heard in both lungs. He was desirous of having a second operation. I found the tumor more prominent, apparently from external inflammation. It was more solid, and the impulse was less distinct.

The patient being placed, as at the previous operation, in a semi-recumbent posture, three needles were introduced as before; there was much less motion of them. Dr. Warren assisted me, Drs. Putnam and Oberly being present also. Twenty cells were at first used, a galvanometer having been previously introduced into the current; the needle showed a deviation of thirty-three degrees. After three minutes twenty-two cells were used. At the fourth minute six more cells were added, causing a deviation of forty-five degrees. The pulse became a little weakened at the fifth minute. At eight and one half minutes the pa-

tient had some pain in the right arm to the elbow. At twelve and one quarter minutes the deviation was forty-six degrees, and the patient felt faint. The number of cells was reduced to sixteen, and the deviation fell to thirty-nine degrees. At fourteen minutes the pulse became weak, 80, and the needles were removed; the first of these had entered one inch and one eighth; the second, one inch and nine sixteenths; the third, one inch and a half. The introduction of them had been more difficult than at the previous operation, owing to the solidity of the tumor.

During this operation, as at the first, no untoward symptoms appeared until after fourteen minutes, when the pulse and strength fell off. In both instances the removal of the electrical current relieved the patient, and the pulse regained its force.

Six P. M. He was entirely comfortable; the pains in the back and arm had gone; the countenance was bright; he was cheerful and hopeful. Pulse 80, regular, sufficiently full. There was little or no cough.

November 18th. The report was that the patient had had a comfortable night; three drachms of paregoric had been taken. There was a slight redness of the nose, but no pain or dyspnœa or fever. The digestion was normal. Pulse 92, strong. Urine free. The patient was directed to omit the opiate if possible.

November 19th. A very restless night (but without pain or dyspnœa), till the opiate was taken with relief. There was pain in the shoulders towards evening. Pulse 84. The tumor had a very different feel from that which it had before the first operation; it was decidedly firmer, giving the impression of a solid mass; there was no distinct fluctuation, but the swelling projected more. Although there was no external redness or tenderness, it seemed plain that all the parts around the points of puncture were swollen and hardened.

Chloral hydrate	gr. xv.
Potassii bromidi	gr. v.

To be taken at bedtime and repeated *pro re natâ*.

November 20th. Delirium in the night, after the chloral, although the day was comfortable and the mind was clear. The appetite was fair. A slight wheeze and hoarseness were noticed in the breathing. Pulse 84, smaller; veins slightly distended. Tumor evidently larger, with a deep-seated pulsation. Omit bromide at night, if possible.

November 23d. Owing to the apparent evil influence of the bromide, it had been omitted for two nights. The patient had sat up a good deal for relief. He was able to lie more nearly upon his back. When on the left side he had pain in the tumor.

November 26th. He had been comparatively comfortable. The tumor was smaller and still solid, with only the slightest impulse. But there was bronchial respiration over the whole extent of the tumor.

November 30th. The patient reported that he had lain on the left side, and felt easy.

December 3d. Had lain indifferently on either side, and had walked in his chamber. There were no pains in the back and arms.

December 6th. Rather more wheezing, which, with the slight cough, can be relieved by throwing the head backward. Less appetite. A slight suppuration at one of the points where a needle had entered; otherwise no apparent inflammation or other external result from the operation.

December 11th. Pain in both sides. Pulse 80, less in the right radial than in the left.

December 14th. Some dyspnœa, requiring the patient to sit up at times. Pulse 60 to 70, and quite small in both radials. Digestion still fair.

December 20th. Nights more restless, and the patient was growing weaker. He complained of more pulsation and heat in the tumor. Cough increased. No fever. Digestion still good. For two or three days the left hand had felt cold. The tumor was larger, and extended to the fourth rib; it was quite solid, but towards the axilla there was an evident deep pulsation, and tenderness existed there. There was a little bronchial respiration at the front and in the back. Pure vesicular murmurs generally, in both lungs.

December 28th. Some dysphagia during the past week; otherwise no material change.

January 3d. Severe pain in the chest; more cough; sputa frothy-white. The nights are tolerable; extract of valerian is taken as a sedative. The tumor is still larger, but quite as solid; in fact, the whole of the right breast is pressed out, and vesicular respiration is absent throughout that front and lessened in the right back. Through the left lung, front and back, the respiration is loud, puerile. On the day before (January 2d), owing to pain, two leeches had been applied, which had caused free bleeding.

January 6th. The tumor is larger, more painful. The patient had morphine injections with comfort. His countenance is much worse. Feet swollen. Bronchial respiration behind at the root of the right lung.

January 16th. A letter from the attending surgeon says, "Mr. S. still exists, but no better than when you last saw him. About a week ago he was suddenly seized with dyspnœa resembling asthma, during which his hands and ears became livid; from this he recovered only to have a more severe attack within twelve hours. When I saw him he was gasping for breath, with livid lips, ears, and face, and almost imperceptible pulse. The tumor has grown much larger within a few days." The right lung was almost wholly useless, and the left was much impaired. Both legs, the right arm, and the right side of the thorax were greatly œdematous. Scarcely any pulse in the right wrist; that in the

left was very small and feeble. The impulse of the heart shook the chest and head. He could not lie down; an attempt to do so a few days previously caused such dyspnoea that he was thought to be dying. He sat up, resting his head on a chair in front of him. Little pain. No appetite. The hypodermic use of morphine kept him easy. The mind was terribly disturbed; violent outbreaks of passion occurred; he was delirious at times.

January 21st. He died quietly.

Autopsy by Dr. Fitz, January 22d. Body well formed, though small; marked rigor mortis; evident emaciation. Head not opened.

Right chest much less distended than during life. A slight rounded prominence, two inches in diameter, near the cartilages of first, second, and third ribs of the right side. The skin over the upper anterior half of the right breast was firmly united to the ribs, mainly through thickening and condensation of the sub-cuticular areolar tissue. The pectoral muscles were less in size than normal. The intercostals were pale and translucent, containing numerous gray and opaque lines apparently of fibrous tissue. At one part, between the first and second ribs, the intercostal muscle was absent over a space of the size of the finger-nail; a pale, friable coagulum filled the space.

The pericardium and heart showed no sign of disease.

The left lung at its apex was adherent; and in the upper lobe, especially towards its upper part, were numerous small, gray nodules, slightly opaque, grouped together in a more or less foliate manner. Elsewhere were occasional minute cheesy spots surrounded by dense pigmental fibrous tissue. The pleura near these spots was puckered and contracted. Similar appearances were observed in the upper part of the right lung. This lung was so firmly adherent anteriorly that to separate it the scalpel was needed. Posteriorly, the pleura costalis could be torn up with the finger. The lower lobe was separated from the diaphragm by about a pint and a half of clear yellow serum. This lobe was a more or less rounded mass; the pleura over it was thickened, contracted, and opaque. The pleura was generally thickened everywhere, but there were no adhesions. From the ascending aorta an aneurism of the size of an infant's head projected and pushed out laterally and upward above the superior vena cava and its branches. Its walls were thick except in the intercostal space formerly alluded to. The branches from the arch were unaffected. The inner surface for half an inch above the valves was comparatively unaltered, though the arch had undergone considerable dilatation. The interior of the sac proper was lined by a dense, partly decolorized, laminated thrombus, spread over the surface with tolerable uniformity. There was no one point where the clot seemed to show any definite relation to the probable entrance of the needles used in puncturing. The thoracic and

abdominal aorta showed occasional patches of chronic endarteritis. In the right subclavian vein was an old thrombus almost completely obstructing the vessel. This vein had been cut off more than an inch and a half from its terminus; hence its cervical extent could not be ascertained. The left subclavian and azygos veins were unobstructed.

The œsophagus showed no signs of pressure. The mucous membrane of the trachea, in the immediate vicinity of the bifurcation, presented marked alterations; extensive ulcerations of it had occurred, exposing the cartilages over half of the circumference of the trachea. The mucous membrane adjacent to this was red and opaque, and both that and the ulcer were covered with a muco-purulent secretion. The spleen was normal. In the kidneys were alterations due to chronic passive congestion. The liver was normal in size; the hepatic veins were gorged with blood. There was an approach to the nutmeg condition of the acini. The stomach and intestines were not examined.

Remarks. I believe this is the first case in this country of aneurism of the arch of the aorta in which electrolysis has been tried. But Dr. Keyes reports a case¹ in which it was applied to an aneurism of the abdominal aorta. Four applications were made, March 30, April 6, May 4, June 22, 1871. Death occurred July 18th. Pain and nausea were relieved and the patient felt generally better, but was exhausted.

As will be seen by the preceding history, although the tumor became harder after both operations, and lost a good deal of its impulse, and although in some respects the patient was relieved, as, for example, of his inability to lie save on one side, there was no real improvement, and death occurred sixty days after the first operation. This is not a very flattering result.

Let me now touch a little upon European and American experience, and finally try if possible to decide under what circumstances we ought to operate.

Ciniselli, a distinguished physician in Italy, first proposed and performed the operation upon aortic aneurism. In 1870, he reported nine cases between 1846 and 1866,* fourteen between 1868 and 1870; twenty-three in all.² Four of these only had been operated on by Ciniselli; nineteen were treated by others. The earlier cases were more fatal than the later ones. Only four out of the twenty-three seemed cured at the end of four, eight, eight and a half, and nine months. The number of operations in each case was as follows: in one case, twelve operations; in two cases, six; in seven cases, one; in eleven cases, two.

The numbers of needles used in the operations were in four cases,

¹ New York Medical Journal, December, 1871; quoted in Beard and Rockwell's Medical and Surgical Electricity, New York, 1875, page 754.

² Annali Universali di Medicina, cexiv. 292, November, 1870; Schmidt's Jahrbucher, cl. 31, 1871.

two; in seven cases, three; in seven cases, four; in one case, five; in three cases, six; and in one case, seven.

The number of minutes during which electricity was applied was as follows:—

In three cases it continued five minutes; in four cases, thirty minutes; in two cases, ten minutes; in two cases, twenty minutes; in two cases, fifteen minutes; in one case, eighteen minutes; and in two cases, thirty-five minutes.

Ciniselli uses the following arguments for operating:—

(1.) Electro-puncture is the most rational method of treating aneurisms of the aorta, internal as well as those externally visible.

(2.) Electricity causes coagulation of the blood while being applied, and this effect increases after the operation is concluded, till the clot fills the sac and makes it a solid tumor.

Among the favorable circumstances are: (1.) An aneurism inside of the walls of the chest. (2.) A sac projecting from the walls of the aorta with a narrow mouth. (3.) No complication with other inflammations or disturbances of the circulation than those caused by the tumor itself. (4.) A good constitution of the patient.

The above would be favorable even if the tumor were distinctly protruding through the walls of the chest.

Unfavorable circumstances are: (1.) Atheromatous disease of the artery. (2.) Local inflammations. (3.) Large mouth to the sac, or an enlarged artery communicating with the sac. (4.) If the aneurism project much from the surface of the chest and the opening from the artery be large enough to allow the blood freely to circulate, it may circulate in and around the coagulum, and if the covering of the aneurism be soft or sloughy, fatal external hæmorrhage may occur.

In all such unfavorable circumstances we must speak freely with the patient about the risks of the operation.

The electrical apparatus must have sufficient force and tension.

This method of treatment has apparently not been much used by others on the Continent of Europe.¹ In Great Britain, however, it has been employed, and cases are published. Among them are the following:—

Dr. John Duncan, of Edinburgh, in a long article read before the Medico-Chirurgical Society, March 7, 1866, on galvano-puncture in aneurisms,² cites a case which he claims as the first of its kind in Great Britain. A man forty-five years old consulted Dr. Duncan in 1864. Various remedies were ineffectually tried. The tumor covered half of the sternum and of each clavicle, and measured thirteen inches. Vari-

¹ Petrequin, of Lyons (*Althaus, Value of Galvanism*, London, 1846), first used galvanism for aneurisms.

² *Edinburgh Medical and Surgical Journal*, April, 1866, page 920.

ous nodules threatened to burst, superficial ulceration occurred and bloody fluid was exuding, and finally, copious hæmorrhage took place just before the operation was done. December 3d, needles were kept in two hours and a half. Gas was disengaged during the operation. December 4th, two more needles were introduced and retained twenty-five minutes, when gas again escaped. The patient died December 11th. In Dr. Duncan's history of the operation, he says that Liston operated in 1832 on subclavian aneurism. He gives Ciniselli's tables of fifty cases, of which twenty-three were cured, twenty were not cured, and seven died; four only were on the thoracic aorta, and these four were not cured. He states that intense pain is sometimes caused, and he advises needles of the smallest size.

In the *Edinburgh Medical and Surgical Journal* for August, 1867, Dr. Thomas R. Frazer treats of the subject, and gives a case in which sloughing ensued after the operation. The tumor augmented, and a second operation was performed. Clots were formed, but death was not delayed. Dr. Frazer would use galvanism to prevent an external opening, not hoping to cure an internal aortic aneurism. Experiments on the effects of galvanism are subsequently given.

In the *Edinburgh Medical and Surgical Journal* for 1870¹ is a notice of three cases published by De Cristophoris of Milan. In all three instances the disease ended in death, although in the first it seemed mitigated for a time and delayed. In the second, death ensued from external hæmorrhage, two days after the operation. In the third, great relief followed temporarily, but death with internal hæmorrhage in eleven days.

Dr. Charles Bastian² gives a very interesting lecture on the whole subject, founded on a case in which he used electrolysis. He speaks of its innocuousness in the cases referred to. He operated October 8th, 13th, and 18th, and the patient died October 29th. A sacculated aneurism of the most favorable kind for an operation was found. A clot unattached, but which Dr. Bastian considered the result of the operations, was found in it. Dr. Bastian used the needles as we did, that is, with the positive pole of the battery applied to them; and he considers that the best method.

In *The Lancet* for June 20, 1874, Dr. McCall Anderson, of Glasgow, reports the termination of a case first published in 1873,³ in which galvanism was used four times with the result of lessening the tumor to one fourth of its previous size. It had become solid, and the pulsation was much lessened. The patient felt well, though there was still a pulsation in the chest, and Professor Anderson did not claim the case as one of perfect cure, but at the same time he says, "No one can deny

¹ Page 537.

² *The Lancet*, November 22, 1873, page 594, and November 29, page 623.

³ *The Lancet*, February 22, 1873, page 261.

the vast benefit which the patient has derived from galvano-puncture." She went out to heavy work contrary to advice, and continued four months so occupied. The symptoms were all aggravated, and the patient died January 7, 1874, about thirteen months after the operation.

Anderson advises to use the positive pole as we did; he recommends a large-celled battery, but a weak current.

The following is a tabular statement of these facts up to November 7, 1872; it comprises all that I have been able readily to find.

THORACIC ANEURISM—ELECTROLYSIS.

Date.	Name.	Number of Cases.	Result (unknown in 13 cases).		
			Cure.	Death.	Relief.
1846-70.	Ciniselli. ¹	23	6		
	do. (in Althaus). ²	2	1	1, after four mos., suddenly.	Great relief in the interval.
1866.	Duncan. ³	1		1, on eighth day.	
1867.	Duncan and Frazer. ⁴	1		1, not delayed.	
1873.	Bastian. ⁵	1		1, on twenty-first day.	
1873.	Althaus. ²	3		1.	2.
	do. (Arteria innominata).	1		1, in a few days.	
1874.	Anderson. ⁶	1		1 in thirteen mos.	Prolonged relief.
				1, late.	Mitigated and relieved.
1870.	De Cristophoris. ⁷	3		1, in two days.	•Great relief.
				1, in eleven days.	Great relief.
1872.	H. I. B.	1		1.	Relief to certain symptoms.
		37	7	11	6

A little less than one third die soon. A little more than one third are either cured or relieved. Less than one fifth are cured, and even these have relapses.

What ought to be our position now in regard to this operation? I should hold the following principles to be correct:—

(1.) In any case in which treatment such as Valsalva's, as modified by Tuffnell, or still further as suggested by myself,⁸ and in which there can be no doubt from the physical exploration of the chest that aneurism of the arch of the aorta exists; if, moreover, we find that the lungs

¹ *Sugli aneurismi dell'aorta toracica.* Milano, 1870; New York Medical Journal, December, 1871.

² Medical Electricity.

Edinburgh Medical and Surgical Journal, April, 1866, page 920.

³ Edinburgh Medical and Surgical Journal, August, 1867, page 101.

⁴ The Lancet, November, 1873, page 594.

⁵ The Lancet, June 29, 1874.

Edinburgh Medical and Surgical Journal, June, 1870, page 537.

⁸ Proceedings of the Boston Society for Medical Observation, February, 1866, and subsequently published in the Boston Medical and Surgical Journal.

are not very much involved, if we have made up our minds that the case tends certainly to death, perhaps attended with severe suffering, — in such a case there can be no doubt that we should be justified in advising electro-puncture, for relief at least, and with the hope of a cure if the aneurism be small.

(2.) As to how it should be done, whether by applying to the needles the positive pole or the negative, or both, or one and the other alternately, I think no decision can be made further than this: the positive pole causes a firmer clot, and disengages less gas than the negative. It was used in our case. A great diversity of opinion exists as to these questions, which cannot be settled till we get further facts.

(3.) A mild current should be used at first, and continued for some time. I have questioned whether in our case we did not too rapidly increase the number of cells, and whether it were not on that account that our patient had the peculiar symptoms.

(4.) Absolute rest before and after the operation, if possible in a perfectly horizontal posture, should be maintained for months, according to the principles laid down by Tuffnell, although I would allow a little more food than he does.

(5.) In regard to drugs, I should be governed by circumstances; gentle laxatives are admissible; perhaps digitalis, if the pulse be too rapid. Iodide of potassium might be tried; also cold or compression; if need be, leeches might be applied.

RECENT PROGRESS IN PHYSIOLOGY.

BY H. P. BOWDITCH, M. D.

TRANSFUSION.

PHYSIOLOGICAL investigation within the last few years has greatly extended our knowledge of the conditions under which transfusion may be successfully performed. About two years ago, Worm Müller¹ studied the dependence of the arterial blood-pressure on the amount of blood circulating in the vessels. His experiments were made on dogs, and his conclusion was that three distinct grades of fullness of the blood-vessels were to be recognized: —

(1.) A grade extending from the greatest anemia consistent with life to a condition in which the vessels contain twenty or thirty per cent. less than their normal amount of blood.² Here the arterial blood-pressure increases quite regularly from twenty-five to one hundred and thirty millimetres of mercury, in proportion to the amount of blood present in the vessels.

¹ Arbeiten aus der physiologischen Anstalt zu Leipzig, viii. 159.

² The blood of the dog is estimated at 7.7 per cent. of the weight of the animal.

(2.) A grade extending from a condition in which the vessels contain about twenty-five per cent. less to one in which they contain from thirty to fifty per cent. more than the normal amount. Here the rise of blood-pressure with increasing volume of blood is very slight.

(3.) A grade in which the blood-volume exceeds the normal amount by more than thirty to fifty per cent. Here the blood-pressure remains unchanged, because the vessels are, according to the author, abnormally stretched.

The first grade is characterized by liability to anæmic convulsions; the third by the occurrence of vomiting. In the second grade no morbid symptoms are noticed, and this grade may therefore be regarded as representing the limits within which the vessels have the power of adapting themselves to their contents. Within this grade a sudden increase or diminution of the blood-volume causes only a very temporary increase or diminution of blood-pressure. The rapidity with which the blood-pressure returns to its normal value is so great that it cannot be accounted for by any diffusion of fluids between the blood and the tissues, and indicates that the regulating influences must be sought in the nervous system. This view is strengthened by the fact that after section of the cervical cord the phenomenon disappears.

Lesser¹ continued the series of experiments above described. He found that after loss of blood the blood serum becomes more watery and the coloring matter of the blood is diminished in amount. As this result follows even when both lymphatic ducts have been tied, it is evident that a *direct* diffusion of fluid from the tissues to the blood-vessels must take place. This diffusion of fluid and consequent dilution of the blood, as estimated from quantitative determinations of its solid constituents, is not sufficient to explain the observed diminution of the coloring matter of the blood; and the author is therefore led to the hypothesis that during the flow of blood from a divided vessel the first portions of blood which escape are relatively richer in globules than those which flow later, when the force of the blood-stream is diminished.

Experiments consisting in the introduction of an additional amount of blood into the vessels showed that under these circumstances a diffusion of fluid from the vessels to the tissues takes place, though the amount of this diffusion could not be accurately determined. It was found in these experiments that no morbid symptoms were produced even when the injected blood equaled in amount that which was normally present in the vessels.

It will be seen from the experiments of Worm Müller and Lesser that the limits within which the blood-volume may be varied with impunity are pretty wide ones, and that in an ordinary transfusion there can be little risk of producing a dangerous degree of plethora.

¹ Arbeiten aus der physiologischen Anstalt zu Leipzig, ix. 50.

The question whether the blood of animals may be safely transfused into the human system has lately received a good deal of attention. It was generally regarded as settled in the negative, when, a few years since, the work of Gesellius¹ again awakened an interest in the matter. This writer maintained the harmlessness of transfusions between two different species of animals, and between animals and men. This view was based upon statistics of the operation, and upon experiments of his own performed upon dogs, lambs, and calves. His method consisted in transferring the blood by means of a short glass canula directly from an artery of one animal to a vein of another animal or of a human being. Hasse² also transfused the arterial blood of lambs directly into the veins of patients suffering from phthisis and other diseases, and considered the results upon the whole favorable. He mentions, however, as frequent results of the operation, chills and fever, and sometimes hæmaturia, or rather "hæmoglobinuria," to use the term employed by Ponfick³ to indicate the presence of the coloring matter of the blood, without any blood globules, in the urine. In addition to these symptoms, Fiedler and Birch-Hirschfeld⁴ mention dyspnoea, pain in the back, vomiting, and sometimes urticaria, as the result of the direct transfusion of lamb's blood into consumptive patients. No improvement in the condition of the patients was observed.

Several fatal cases of lamb's-blood transfusion have been placed on record, but the autopsies have not thrown much light on the cause of death.⁵ The subject has, however, been very thoroughly investigated in experiments on animals. Panum⁶ experimented on dogs on which, previous to the transfusion, a depletion of corresponding amount had been made. He found that a transfusion of fifty-five per cent. of lamb's blood was fatal after three hours, while a transfusion of fifteen per cent. of calf's blood caused death after thirty hours. Bleeding from the wound and hæmaturia were constant symptoms. The autopsies showed hyperæmia of the kidneys, ecchymoses of the liver, and infiltration of blood into the mucous membrane of the large intestine. Ponfick⁷ found that similar quantities (thirteen to eighteen per cent. of the normal blood-volume) produced fatal results when injected into the veins of dogs. Similar results were obtained by Mittler⁸ in experiments on birds and mammals. He describes the kidneys as not only hyperæmic but as sometimes the seat of infarctions. Worm Müller has in a recent work⁹

¹ Die Transfusion des Blutes. St. Petersburg and Leipzig, 1873.

² Die Lammblut-Transfusion beim Menschen. St. Petersburg and Leipzig, 1874.

³ Virchow's Archiv, lxii. 273.

⁴ Deutsches Archiv für klinische Medicin, 1874, page 545.

⁵ Masing, St. Petersburger medicinische Zeitschrift, iv. 68.

⁶ Virchow's Archiv, xxvii. 448.

⁷ Virchow's Archiv, xxvii. 304.

⁸ Wiener Sitzungsberichte, lviii., 1868.

⁹ Transfusion und Plethora. Christiania, 1875.

studied very carefully the effect of the transfusion of lamb's blood into dogs. He finds that a fatal result always follows the introduction into the circulation of a dog of a quantity of lamb's blood equal to twenty per cent. of the normal amount contained in the vessels. Neither a preliminary depletion of the dog nor defibrination of the lamb's blood diminishes the fatal effect of the transfusion.

Capillary hæmorrhage from the wound and blood-colored urine are the principal symptoms. The autopsies show almost always great hyperæmia of the kidneys, and frequently a similar condition in the lungs, with infarctions or small extravasations, effusion of blood into the intestinal canal, and bloody exudations into the peritoneal cavity.

Pontick¹ has fixed the amount of lamb's blood which can be transfused into a dog without producing bloody excretions at one and a half per cent. of the dog's blood-volume. The statement of Gesellius that four per cent. can be thus transfused is probably explained by the fact that the method employed by this observer (direct transfusion from artery to vein by a short canula) does not permit the amount of blood transfused to be accurately measured.

It will next be of interest to consider how the above-mentioned symptoms and morbid appearances are produced. In the first place, it seems evident that the fever is not due to the transfusion of *foreign* blood as such, but to its transfusion *directly* from artery to vein; for it has been shown by Liebrecht² that fever may be produced in a dog by direct transfusion from an artery to a vein of the same animal. Here, of course, the blood-volume is unaltered, the only change being that the blood reaches the right side of the heart in greater abundance and in a less deoxidized condition than under normal circumstances. It is to a congestion of the portal system caused by this increased pressure in the *venæ cavae* that the author is inclined to attribute the production of fever. He alludes in this connection to the increased size of the spleen in fever. In order to show that the fever in these cases was not traumatic, and due to the application of the ligatures, the vessels were in one experiment tied three hours before the transfusion took place. During this interval no fever occurred, but as soon as the transfusion was made the temperature in the rectum rose from 39.6° to 41.5° C.

The hæmoglobinuria implies destruction of the red globules and excretion of their coloring matter. How this takes place has been investigated by various observers. Landois,³ in a series of experiments on a great variety of animals, comes to the following conclusions.

(1.) The blood-serum of many mammals dissolves the blood-globules of other mammals. Of the different sorts of serum thus far investigated,

¹ Virchow's Archiv, xxvii. 321.

² Centralblatt für die medicinischen Wissenschaften, 1874, page 580.

³ Centralblatt für die medicinischen Wissenschaften, 1873, pages 883 and 897.

that of the dog is the most powerful in this respect, that of the rabbit the weakest.

(2.) Mammalian blood-globules have very different powers of resisting solution in the serum of other animals. The globules of the rabbit are very easily dissolved, while those of the cat and dog are very resistant.

(3.) In transfusions of foreign blood, the globules of one species are dissolved in the blood of the other. Defibrination of the transfused blood does not alter this result.

(4.) The constituents of the dissolved globules are excreted chiefly by the kidneys, occasionally also by the intestines, uterus, bronchial tubes, and into the serous cavities.

It will thus be seen that in any case of transfusion of foreign blood, the number of globules dissolved, and the consequent amount of hæmoglobinuria, will depend, first, upon the amount of blood transfused, and secondly, upon the solubility of the two sorts of blood-globules in the plasma of the blood with which they are mixed.

In a later article,¹ Landois follows very carefully under the microscope the solution of blood-globules in serum of a different sort of blood. The first effect which is observed when a drop of blood is placed in foreign serum is that the globules adhere together and become spherical. They then lose their coloring matter, the globules at the circumference of the drop being first affected. Finally, nothing remains but an adherent, tenacious mass of stroma substance, in which the outlines of the single globules are at first discernible, but after a slight agitation in the surrounding fluid these outlines disappear and the whole mass is seen to consist of tenacious threads and fibres. This fibrous substance thus formed from the stroma of the blood-globules is termed by the author "stroma-fibrin," to distinguish it from the ordinary or "plasma-fibrin." Landois considers that it is this sort of fibrin which Heynsius has described² as being derived from the blood-globules.

When, by the transfusion of foreign blood, two sorts of blood are mixed together in the circulatory system, the conditions necessary for the formation of stroma-fibrin are present, and the more venous the character of the blood, the more rapidly will the stroma-fibrin be formed, for it is found that the presence of carbonic acid favors the solution of the blood-globules.³ The more rapidly the transfusion of foreign blood is made, the larger and more tenacious will be the masses of stroma-fibrin formed. When stroma-fibrin has once been formed in the circulation, it may act as a foreign substance and lead to the production of plasma-fibrin. The coagulation may thus become more extensive. Even

¹ *Centralblatt für die medicinischen Wissenschaften*, 1874, page 420.

² *Pflüger's Archiv*, ii. 1, iii. 414, and ix. 514.

³ Cf. Brown-Séquard, *Journal de Physiologie*, i.

when the transfusion is made with the blood of the same species of animal, solution of blood-globules and formation of stroma-fibrin may occur when the globules of the transfused blood have lost their vitality. This may take place in consequence of exposure^o of the blood to too high a temperature, or of prolonged exposure to cold.

(To be concluded.)

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

EDWARD WIGGLESWORTH, JR., M. D., SECRETARY.

OCTOBER 18, 1875. *Multiple and Idiopathic, Medullary, Round-Cell Sarcoma of the Skin.* — This paper was read by DR. WIGGLESWORTH. It may be found in the *Archives of Dermatology* for January, 1876.

DR. BOLLES mentioned a case which he saw once at the City Hospital, of multiple hard red tumors of the skin of the breasts, abdomen, and arms of a woman under forty years of age. Those about the left breast, axilla, and left side were confluent, but all around the borders and beyond these limits they were scattered and single. They had been of slow growth, and caused inconvenience only by their pressure. He had seen the case but once, and it had been diagnosed by the surgeon in attendance as cancer of the skin.

Displacement of the Heart to the Right Side. — DR. H. I. BOWDITCH mentioned a case in which there was this transposition without any displacement of the other organs. Such cases, he said, are extremely rare. Usually if the heart is displaced the other organs are so likewise. The sounds of the heart were faint. No inflammatory disease was present.

DR. DWIGHT asked if the patient were right-handed, as it was formerly believed that this condition or its opposite bore some relation to the position of the heart. This point had not been observed.

DR. J. J. PUTNAM inquired if patients with such displacements were specially liable to disease.

DR. BOWDITCH said the cases were too few to warrant any statements upon this point: that such cases, however, were usually detected by examination for some suspected disease.

Enlargement of the Bursa Mucosa over the Ligamentum Patellæ. — DR. PORTER showed two specimens.

CASE I. C. G., aged fifty, born in Ireland, was by occupation a currier. The tumor followed a blow received ten years ago; it grew slowly at first, but rapidly during the last two years. At the time of operation it was five inches broad, six inches long, and three and one half inches thick; it was ovoid and movable, elastic and non-translucent. The skin over the tumor was tense, smooth, bluish, and its veins apparent. There was no pain, but inconvenience from the size and position of the tumor. August 25th, Dr. Porter made two incisions, about five inches each in length, through the skin on the top of the tumor, inclosing an elliptical-shaped piece of integument. The sac was dissected out entire. It was quite adherent to the patella. Only three ligatures were required, and

the flaps were brought closely together by numerous sutures, an opening being made in the outer flap low down to allow the escape of pus, and through this opening the ligatures were brought. The leg was placed on a ham-splint, and compression applied to the knee by bandaging over layers of cotton batting.

August 26th. Little or no pain since the operation. The leg was left untouched.

August 27th. Dressings removed. Leg looked well. No discharge or inflammation. Simple cerate was applied over the line of the incision, and a cotton-batting dressing reapplied.

August 28th. The alternate stitches were removed, and their place supplied by strips of plaster. The wound was dressed as before. Patient comfortable.

August 29th. One ligature removed; also the remaining stitches, and plaster substituted.

September 1st. The flaps have joined by first intention. Not a drop of pus since the operation, and no pain. All the ligatures came away the previous day.

September 3d. All dressings omitted, except cerate over the incision made in the outside flap for drainage, and which is rapidly healing.

September 8th. Patient sits up, nearly well.

September 10th. Discharged.

CASE II. Ann W., a domestic, aged thirty-one, Swede, thirteen years ago injured her ankle. The knee does not seem to have been hurt, but the tumor has been noticed ever since. For the last three years the swelling has not increased in size; it is globular, movable, and measures five inches in length, four in breadth, and two and three quarters in thickness. It was excised October 9th.

Triplets with Triplex Placenta. — DR. FITZ showed a placenta from a case of triplets, bearing three distinct sacs. It occurred in the practice of Dr. Doherty, of South Boston.

Sarcoma of the Choroid. — DR. HAY showed a specimen of sarcoma of the choroid.

Renal Calculus. — DR. C. P. PUTNAM showed a renal calculus of the size of a pea, which had required three weeks to pass from the kidneys to the bladder, with only intermittent pain, and this not excessive. There was no sudden cessation of pain. The calculus remained in the bladder about a week, and found its way to the end of the penis without difficulty. Here, according to the patient, it lodged all night, causing fearful pain, but disengaged itself in the morning.

Facial Paralysis. — DR. J. J. PUTNAM related a case of facial paralysis following an operation during which the nerve had been divided. Recovery had taken place, though the prognosis is usually unfavorable.

Surgical Cases. — DR. BEACH read a paper which was reserved for publication.

Dislocation of the Peroneus Longus Muscle. — In regard to the dislocation of the peroneus longus, which subject had been referred to by DR. BEACH, DR. FIFIELD said that Sir Astley Cooper recommended Schoolbred's laced

stocking. Dr. Beach had also alluded to a dislocation of the long tendon of the biceps muscle, quoting a case from the practice of Mr. John Soden, of Bath, Eng. Dr. Fitchfield thought that this state of things did not occur, and added that Mr. Robert Adams in his treatise on rheumatic gout had shown that there are no true dislocations of this tendon, unless very slow ones, though change of place may occur. He has in particular annihilated the case of Mr. Soden, of Bath, and shows that dislocation takes place by enlargement of bones with the addition of chronic rheumatic arthritis. Moreover, the long head of the biceps may entirely disappear without marked change in the position of the shoulder. The separation of the acromion in such cases is curious. As to the case of fracture of the external auditory process, which had been mentioned, Dr. Fitchfield was rather inclined to regard it as a case of fracture of the glenoid cavity. Morville, of Lanay, has given a series of these cases of fracture of the glenoid cavity. The paper may be found in the *Archives Générales de Médecine* for the years 1856 and 1858. In such fractures of the glenoid cavity, Dr. Fitchfield had always noticed that the bleeding was upon the right side.

In reply to the comments made by Dr. Fitchfield on the case of dislocation of the long head of the biceps, reported by Mr. Soden on July 6, 1841, DR. BEACH stated that, although Mr. Adams (from whose recent work on chronic rheumatic arthritis Dr. Fitchfield quoted) considers the injury to Mr. Soden's patient to have been a sprain and not a dislocation of the tendon, so high an authority as Sir James Paget, in his recently published *Lectures and Essays*, recognizes the dislocation, and at a lecture exhibited a specimen from the museum of St. Bartholomew's Hospital. He said, in reference to it, that "in this specimen, as in that of Mr. Soden (for the two are singularly alike), the long tendon of the biceps has slipped from its groove about half an inch inwards, and is there confined by a strong band of fibrous tissue, which passes over it and straps it down. Mr. Soden's case is in the museum of King's College." He also quotes a case recognized by Hamilton in his work on fractures and dislocations, in which there was no autopsy. Messrs. Flower and Hulke, in *Holmes's Surgery*, make the following reference to the injury: "In the opinion of Mr. Adams the reported cases of dislocation of the long tendon of the biceps, with partial displacement of the humerus upward, are also to be classed as the effects of disease and not of injury; but the proof of this appears to be not quite so satisfactory as in the former case," referring to those in which rupture of the tendon had taken place.

Corrosive Ulcer of the Duodenum associated with Interstitial Nephritis.—DR. TARBELL read the case, and DR. FITZ showed the specimen. The case was published in the *JOURNAL* for December 23, 1875.

Ununited Fracture of the Tibia and Fibula.—DR. PORTER showed the specimen. The patient, a woman aged thirty-three, fell at the age of two years upon the floor, fracturing both bones of the left leg above the ankle. The injury was regarded as a sprain, and nothing was done for it for a year. A surgeon then operated, and, as the patient says, "cut the cords and set the bone." But, as far as the patient remembers, her leg was always in its present condition, namely, that before operation, when there seemed to be a false joint,

four inches above the inner malleolus, where the fragments meet at an angle, the bones never having reunited. The leg was considerably shorter than the other, and the foot atrophied, the patient wearing a shoe with an iron support beneath, to make up for shortening, and getting about only with the aid of crutches.

The patient received rest, hospital care and fare, and tonics for three weeks. October 23d Dr. Porter operated, the patient having been etherized. The leg was amputated above the point of fracture. Side flaps were taken below the fracture, and the incision was extended farther behind than in front, to secure better drainage. The leg had been bandaged before the operation; the hæmorrhage was slight, and only a few ligatures were needed. The patient recovered well from the ether without vomiting. Subsequent severe pain was relieved by morphia administered subcutaneously. The pulse was 80, and regular, but rather weak, and half an ounce of brandy was given every three hours.

November 15th (twenty-fourth day). The wound has been strapped for two days. The edges come well together, and the stump looks nicely.

Calculus in a Child. — DR. PORTER showed the specimen. October 20, 1875, J. J. C., aged four years, was brought to the Massachusetts General Hospital by his mother, who said that for two years he had been troubled by pain during and after his micturition, which was too frequent. Lately the pain had caused him to cry. At each time also the rectum became prolapsed, causing additional pain. Sounds were passed, and a small stone was detected in the bladder by the click communicated to the finger.

October 24th. The bowels were well cleared in the morning by an injection of soap and water. Dr. Porter operated, with the patient under ether. A metallic sound being passed, the stone was detected by the ear and by the finger. It was then removed by lateral lithotomy. An incision was made from the median line to the left side of the perinæum. No ligature was applied. The hæmorrhage was slight, and was checked by a sponge left in the wound for an hour. Before night the patient passed urine twice; the first time wholly through the wound, the second time half through the urethra and half through the wound.

The stone was oval and flat. Its weight was one hundred and six grains. Both the body and the nucleus, according to Dr. Wood, consisted almost entirely of uric acid.

October 25th. Patient doing well. No hæmorrhage. Good appetite. Pulse of good character, 144 to 150. Urine dribbles away slowly through the wound.

November 2d. Patient doing well. Pulse good, 110 to 120. At night passed his urine mainly through the urethra; exact amount not known.

November 3d and 4th. Passed urine wholly through the wound.

November 5th. Urinated wholly by the urethra three times in succession.

November 6th. Continues to pass urine by the urethra, and wound dry for two days.

November 15th. Wound nearly healed, and covered by a dry crust. Patient to be discharged to-morrow, well.

Paralysis of the Soft Palate after Tonsillitis. — DR. J. J. PUTNAM reported

the case of a girl who had been sent to the out-patient department of the Massachusetts General Hospital by Dr. F. C. Shattuck, with complete paralysis of the soft palate unattended by other paralysis of any other kind; it followed what had been to all appearances an attack of severe suppurative tonsillitis. Electrical examination of the parts had shown that the palatine muscles did not react to the stimulus of the induced current, but readily to that of the galvanic current, indicating that the nerve filaments had degenerated. The question was whether, in view of the rarity of paralysis of the soft palate after simple tonsillitis, and the present prevalence of diphtheria, the case was not one of the latter disease in which, as sometimes occurs, there had been none of the characteristic inflammation in the throat.

Paralysis of the Ciliary Muscle and Palate Muscles. — In connection with the remarks of Dr. Putnam, Dr. WADSWORTH mentioned two cases which he had recently seen of paralysis of the ciliary muscle after diphtheria; there was also difficulty of speech from paralysis of the palate muscles. There was no paralysis of the sphincter of the iris, which often accompanies the paralysis of accommodation. Both the patients were boys about eight years of age; in both the diphtheritic affection had seemed very slight, the exudation on the tonsils being of small extent and transient, so that it had appeared to the attending physicians hardly worth while to call the disease diphtheria. The symptoms of imperfection of speech and indistinctness of vision first appeared several days after apparent recovery. The indistinctness of vision was specially marked in one of the boys, who had some hypermetropia; in him it was present for all distances, while in the other boy it was manifest for near objects only. Letters which could be clearly made out at a distance of several feet could not be read when brought up to eighteen inches or less, but became again distinct when a convex glass was placed before the eye. One of the boys was now improving. The other Dr. Wadsworth had seen only once. This combination of paralysis of accommodation and of the muscles of the palate after diphtheria is not uncommon.

In answer to Dr. Putnam, Dr. Wadsworth said that he knew of no such case in which the ciliary nerves had been examined post mortem. The paralysis usually follows light cases, and there is generally recovery.

Dr. PUTNAM remarked that changes from presbyopia to myopia after diphtheria had been observed.

Treatment of Perforations of the Membrana Tympani. — A paper upon this subject was read by Dr. C. J. BLAKE.¹

Dr. GREEN asked the size of the perforations which Dr. Blake had seen heal under the use of paper.

Dr. BLAKE said that they were always small. Generally, inflammation of the middle ear was set up, and the application of the paper caused growth, filling up and healing.

Dr. GREEN inquired the length of time that these perforations had existed.

Dr. BLAKE answered that, in recent cases, the paper seems to excite a renewal of the discharge. In his experiments tolerant cases had been selected.

¹ JOURNAL, January 13, 1876, page 42.

Case of Fibroma Molluscum. — DR. WIGGLESWORTH showed a man affected by this uncommon and striking disease. The case is to be published in the April number of the *Archives of Dermatology*.

Papilloma of the Larynx. — DR. KNIGHT exhibited a papillary growth which he had removed from the larynx of a sailor from the Chelsea Marine Hospital. The patient had syphilis, but had been hoarse several months before the primary lesion of this disease; hence Dr. Knight inferred that the papilloma occurred independently of the syphilis. The larynx, however, presented the signs of a specific laryngitis at the time of Dr. Knight's first examination. A fine water-color of the larynx and growth, executed by Dr. Quincy, was shown. The growth was situated on the anterior part of the left vocal cord, near the angle of union of the cords. It was of about the size of a common white bean, and was removed in four pieces, the larynx having been previously trained about three weeks for a few minutes daily. The tongue and pharynx were unusually irritable in this case, but the larynx rather less so than usual.

Progressive Locomotor Ataxy. — DR. EDES reported the case. A man aged fifty-four, a brass-finisher, entered the City Hospital about the middle of June, 1875. The statements obtained as to the previous history were indefinite and contradictory. That which agreed best with subsequent observations was to the effect that his paralysis came on gradually, lasting ten years, and was supposed by him to be rheumatism. At the time of his entrance to the hospital he could not walk, but could move his legs pretty well in bed. Muscular irritability to the induced current was good. The muscles did not contract upon faradic irritation of the sciatic, but did so to the galvanic current. The patient felt the sponge everywhere, but it pained only when applied above the pelvis. The urine constantly dribbled away, and was afterward found to contain pus and phosphates.

No cerebral symptoms were noticed, except deafness. His condition did not change materially in any respect except that after two or three months he took a few steps with much assistance. Previous bed-sores had progressed toward healing. In November a diagnosis of reflex paraplegia was suggested, and a consequent examination disclosed the presence of a prostatic calculus.

He died in December, and an autopsy disclosed a bladder very much contracted and thickened, its inner surface red, rough, and granulated. In the prostate was a ragged cavity with sloughy walls, containing two calculi (probably uric acid) and pus. The spinal cord presented gray degeneration of the posterior columns. In the lumbar and lower dorsal regions this lesion occupied the entire space between the posterior horns, extending forward nearly or quite to the commissure. In the cervical region the area of degeneration became narrower and was confined to a strip close to the median line (wedge-shaped columns of Goll). The microscope showed in the fresh specimen granulation-cells, amyloid bodies, and some (though not extensive) fatty deposits along the blood-vessels. The fibres appeared much fewer in number than normal.

The lungs were very deeply pigmented with fibro-calcareous nodules at the apices.

Had the examination of the cord been omitted, the diagnosis of reflex paraplegia would have been apparently fully confirmed by the post-mortem results. Looking at the history, however, in connection with the complete autopsy, it seems highly probable that the ten years of "rheumatism" with gradually increasing paralysis mean the earlier stage of progressive locomotor ataxy, which brought the patient to the hospital only after one of the most distinctive features of that disease (the peculiar gait) was no longer available for diagnosis, since he did not attempt to walk until after two or three months. Any minute description by him of the precise nature of his disability was out of the question. The imperfect history also prevented any certainty as to the relation of the vesical and nervous troubles, though it is by no means improbable that the calculus may have been found as the result of the vesical paralysis which frequently forms a part of the disease.

Concretions in the Bladder. — In this connection DR. FIFIELD called attention to the fact that a click or ring heard when a sound is introduced into the bladder does not always prove that a calculus of appreciable size is contained therein, since such click or ring may proceed either from a prostatic calculus partly projecting into the bladder and struck by the bow or convexity of the sound, or from an aggregation of small calcareous (?) particles temporarily massed together. In this case a second calculus was suspected on account of the ring when the sound was introduced, but with the finger in the rectum only a few grains of calculous matter deposited could be detected, and he had therefore refrained from operating.

DR. SAMUEL GRIDLEY HOWE.

DR. HOWE, after a somewhat protracted illness, died at his residence in South Boston on January 9th. His life, three quarters of a century in length, embraced a period in the history of the world replete with interest, and although he was known chiefly to the present generation as the patient and painstaking instructor of the blind, in which capacity he has achieved a reputation far beyond the limits of his native city, his earlier years were passed in scenes of a far different character. During the Greek struggle for independence in 1824, he joined the Grecian army as a surgeon, and eventually organized a regular surgical service in which he occupied the chief place. For six years he continued his devotions to that country, when illness compelled him to leave. Always an enthusiast in the cause of liberty, we find him subsequently conferring with Lafayette during the revolution of 1830 in Paris, and again at Brussels; and later, during a short visit to Europe on business connected with his life's chief work, he was unable to refrain from rendering assistance to the Poles, an undertaking which led to his imprisonment by the Prussian authorities. He was soon at home again, however, and in 1832 opened the Perkins Institution for the Blind, at South Boston. He threw himself into this work with great ardor, and during a long period of service has contributed more, perhaps, than any other man to the improvement and happiness of an unfortunate class. He has the honor of being the inventor of the method of printing in raised letters, one of the greatest boons ever con-

ferred upon the blind, and by his words and writings has done much for their education all over the world.

He has taken a prominent part in the training of the idiotic and the feeble-minded, and was the principal of the school organized in 1851 for improving the condition of those classes. His philanthropic tendencies led him into many fields of labor which it is hardly within our province to notice. His political views are pretty widely known. He was the intimate friend of John Brown. At the outbreak of the war he became a prominent member of the Sanitary Commission, and at its close was appointed one of a commission to report upon the condition of the freedmen.

Dr. Howe's labors at the blind asylum are full of interest. They have been the admiration of poet, novelist, and many a distinguished visitor to the asylum. The case of Laura Bridgman alone was enough to have established his reputation in his special field, but this was but one bright feature in a life's work well and faithfully accomplished. We hope to be able to give at some future time a brief account of the teaching of the blind so quietly carried on at the South Boston asylum for over forty years. We must content ourselves now with a brief tribute of respect to the memory of its distinguished director.

THE SEWERAGE OF BOSTON.

It gave us great pleasure a few weeks ago to notice with almost unqualified commendation the report of an official consultation upon the sanitary state of our city. The consulting body comprised five eminent physicians, and their views upon the diagnosis, the prognosis, and the treatment in the case under their consideration appeared in a high degree just and exhaustive. A single sentence may be quoted to show the opinion of this commission upon a point of paramount consequence: "We wish to state that our investigations into the nature and the causes of fatal disease in Boston have convinced us of the urgent necessity of providing the city with a more satisfactory system of sewers than we now possess." This emphatic and authoritative expression was the fruit of painstaking research, and was in entire harmony with the convictions of all, in the profession and out of it, who had given the matter any careful study.

But while those who had the sanitary welfare of the city at heart have for a long time appreciated the pressing need of improvement in our methods of sewage-disposal, their belief was based rather upon general impressions that something in our system was wrong than upon substantial evidence of facts. We therefore welcome as a most timely and useful document the report of the commission appointed last March by his honor, the mayor, to investigate the whole subject of our sewerage, and to present plans and estimates for the better removal of the sewage of our large and growing city. The commissioners (Messrs. E. S. Chesbrough and Moses Lane, distinguished civil engineers, and Dr. C. F. Folsom, the Secretary of the State Board of Health) have not disappointed the great expectations which were had in anticipation of their report; they have evidently carried forward their task in full appreciation of

its magnitude, and with a conscientious purpose to solve the immense problem imposed upon them.

We are impressed by the quality of authority which pervades this report: nothing is taken for granted; every statement is founded upon fact. Thus, we feel sure that we have before us the fruit of actual inspection when we read that the catch-basins under the manholes of our sewers are "literal open-mouthed cess-pools connected with the houses in all parts of the city;" that the sewer-outlets are so placed that the sewage matter must precipitate and decompose upon the flats; that sewers in Boylston Street and in Berkeley Street are simply "elongated cess-pools;" and that a large sewer which crosses the north end of the city, with an outlet at each extremity, "had a solid deposit five feet deep." Ample testimony is offered to demonstrate what previously was inferred, that our sewerage is lamentably defective and that the call for amendment is emphatically justified.

To solve this problem, to provide a plan whereby sewage shall start from the houses and go in a continuous current, without interruption, until it reaches its destination in deep water, the commissioners offer a scheme which appears sufficiently comprehensive to fulfill all the requirements of the situation, present and remotely prospective. They recommend the construction of two main intercepting sewers, one on the south side of Charles River and the other on the north side. Both discharge into the harbor far away from the city, the former at Moon Island, the latter at Point Shirley. By this plan, provision is made for the disposal of the sewage of a population of nine hundred thousand. For all the details with regard to the size of the sewers, their outfall, their inclination, their branches, their siphons, their pumping stations, and their reservoirs, we must refer our readers to the document itself, which discusses all these points with great perspicuity.

We presume there will be tolerable unanimity concerning the merits of this very inclusive and far-sighted scheme, until the question of cost comes up. The commissioners estimate that their plans will require an expenditure of \$6,500,000 for their fulfillment. In times like these, when the spirit of economy and retrenchment is in the air, this seems like an extravagance. Into that question, however, we do not feel called upon to enter, except to protest in a general way against any penny-wisdom and pound-folly in matters affecting the public health. And we trust that our municipal law-givers will not lose much time in fruitless wrangling; if the present commissioners have not given us the best plan practicable in the interests alike of economy and of public hygiene, let us have another without delay. Enough is known to demonstrate the imperative need of immediate and radical action.

The report closes with the recommendation of certain measures intended to render dwellings free from sewer-gas and foul drain-smells. One of these is that soil-pipes be carried through the roofs to a point two feet above the latter, and at a distance from chimneys or windows. A second is that rain-water spouts be untrapped and discharge into the sewers, *provided that the upper ends be remote from windows or the tops of chimneys communicating with rooms occupied by human beings*; to this measure there would be some opposition, although we believe it to be a very conservative safeguard against sewer-

gas invasion, in close alliance with the first device, but to be continued only until proper ventilation is provided for the sewers themselves. Another recommendation by the commission meets our hearty approval, namely, that there shall be inspectors whose sole business it shall be to see that house-drains are properly constructed and kept in order, and that no new houses are occupied until they have been properly inspected and their drains have been found satisfactory.

MEDICAL NOTES.

— Many of our readers, who have profited by the advantages of the General Hospital at Vienna, will be glad to learn that, according to our English exchanges, pathology in that city seems to be entering on a new era with the advent of Professor Hischl. The Pathological Institute is to be completely remodeled. New post-mortem rooms are to be built, with proper ventilation, and with windows in the roof, instead of, as at present, in the side walls. There will also be proper laboratories for microscopical work, in which the abundant material afforded by the gigantic General Hospital may be made practically available for the instruction of the students; hitherto this material has been allowed to run to waste in a most unsatisfactory manner. The transference of the medico-legal post mortems from the professor of pathological anatomy to the professor of forensic medicine will enable the former to devote himself exclusively to his proper subjects, while, at the same time, the appointment of three assistants instead of two will still further distribute the merely mechanical functions of the office, and permit the new professor to devote himself to really scientific work, as well as to bestow the necessary amount of time and pains on his course of lectures.

— Dr. John P. Mettauer, of Prince Edward C. H., Virginia, died at his residence November 22, 1875, in his eighty-eighth year. In times past he has contributed many articles to the *JOURNAL*. He entered, says the *Virginia Medical Monthly*, upon the practice of his profession when about twenty-one years of age, and continued constantly at his post until within a few days of his death. No Southern surgeon was more widely known. The *Richmond Dispatch* describes him as “a man of scrupulous integrity, high tone, much culture, and great gravity and dignity of manner.”

— We have received from E. Steiger, New York, the Popular Health Almanac for 1876. It contains a variety of useful information for physicians and druggists, embracing an analysis of the chief popular nostrums, including soothing syrups, enamels, hair restorers, etc., the dangers or uselessness of which are commented upon by good authorities.

— From the same source comes also a pamphlet entitled *Wildungen*: its Baths and Mineral Springs, written by the resident physician, Dr. Stoecker, and translated into English by Dr. Charles Hayer. The springs are alkaline and chalybeate, and are situated in the Duchy of Waldeck; the climate is that of Central Germany.

— G. P. Putnam's Sons have published a pretty little volume entitled *In Memoriam*, containing a biographical sketch of Dr. Ernst Krackowizer, an

address delivered before the New York Academy of Medicine in November last by Dr. Jacobi; also remarks by Hon. Carl Schurz and several members of the German element of the profession in New York. Dr. Krackowizer was an Austrian by birth, and was brought up in the Allgemeines Krankenhaus, and according to Dr. Jacobi would have been the legitimate successor of Schuh, had his political relations with his country permitted him to remain in his native city. He has for twenty-five years been a resident of New York, and the memorial testifies to the good opinion in which he was held by his professional colleagues in that city.

— Dr. Hasse, of Nordhausen, according to *L'Union Médicale*, recommends in cases of lipoma injections of alcohol. He injects a quantity of the liquid into the tumor at various points at intervals of several days, and, as a result the growth soon softens and fluctuates. It only remains to incise the tumor and to evacuate with slight pressure the oily liquid which it contains. The reaction is ordinarily slight.

— A case of recovery from extensive loss of the bones of the head is reported by John R. Hayes, M. D., in the *British Medical Journal* of December 25, 1875. The patient was found May 24, 1874, with an extensive burn on the right side of the head and face, the result of falling into the fire while intoxicated. Extensive sloughing of the integument took place. There were several attacks of delirium during convalescence, and at one time there was paralysis of the left arm and leg. After a time the right parietal and half of the frontal bone became separated from those of the opposite side, and were removed on October 3d. Their inner surface was covered with a thick, curdy matter, and the depressions for arteries, etc., were obliterated. The surface of the dura mater was covered with florid granulations, and a quantity of fetid pus came away. The pulsation of the meningeal arteries could not be seen nor felt. On making slight pressure on each side of the head a quantity of pus welled from between the hemispheres. She had neither headache nor other cerebral symptoms. With the exception of a feverish attack in December, 1874, the patient has remained in good health up to the time of Dr. Hayes's report of the case, April 13, 1875. She goes about at her ordinary duties, not complaining of pain or of any ill effects from the terrible accident.

MAINE GENERAL HOSPITAL.

MEDICAL CLINIC.

BY E. E. HOLT, M. D.

Chronic Diarrhœa: Treatment largely with Bisulphite of Soda. — I. L. H., aged thirty-five, was admitted to the hospital, July 8, 1875, with a history of chronic diarrhœa, which was contracted in the army during the Rebellion. It had been very troublesome, and seven months previously he had had a severe attack, which had continued unabated, although all former means had been employed to check it. Frequently he was obliged to go to stool twenty-five times during the night. The stools were light-colored, usually watery and

slimy, of a very offensive odor, staining the vessel reddish-brown, and containing pus mingled with very little blood. Pain and tenderness existed in the right lumbar, right hypochondriac, and epigastric regions. He was much emaciated, his appetite was poor, and he kept about only by a persistent exercise of his will. He had always been temperate in his habits.

Dr. Thayer ordered a milk diet, a solution of bisulphite of soda (twenty-six minims every six hours), and a powder of opium (half a grain) and subnitrate of bismuth (six grains), to be taken every four hours till the pain and the discharges diminished.

July 10th. Very little pain. Patient was not obliged to get up during the night.

July 14th. No pus or blood found in the discharges, which are lessening gradually. Pain still diminishing, and the patient rests very well at night; the powder is taken only twice daily.

July 16th. Patient feels somewhat stronger; the soreness and pain are nearly gone. The appetite is still poor; tincture of the chloride of iron (eight drops) in syrup of ginger was prescribed to be taken after each meal.

July 24th. Patient improving; has only six dejections daily, the color and consistency of which are more normal; ordered to take subnitrate of bismuth (seven and one half grains) before each meal, the powder of opium and bismuth at bedtime, and to indulge his appetite moderately. No change with bisulphite of soda.

August 28th. There is an eruption on the sides of the face, which constantly scabs over; it has always grown worse as the diarrhoea is diminished; nitrate of mercury ointment to be applied. As the appetite has improved, the patient has eaten sparingly of meats, vegetables, and ripe fruit; his strength is good, and his weight is more than at any time since the war. His abdominal symptoms have disappeared, and he now has two normal dejections daily. He has gradually left off the opium and bismuth, and is discharged, with orders to continue the bisulphite of soda before each meal, and the iron afterward.

Continued Fever (Typhoid); Large Doses of Quinine with little Effect on the Temperature.—Bridget F., aged twenty-one, single, came from Ireland about twelve months ago; she was admitted to the hospital, August 31st, in such a stupid state that but little could be learned of the history of the attack. There was fever, epistaxis, bronchitis, anorexia, and constipation. There were no marked abdominal symptoms, but a measly eruption was present, which extended over the trunk and extremities. This was thought to be due to the condition in which Dr. Gordon had found her the day before; buried in blankets and sweating profusely. Directions were given that her bowels be moved by laxatives, and that tincture of aconite (one drop) be taken in solution of the acetate of ammonia (one drachm); light diet of milk, beef-tea, etc.

September 7th. The temperature begins to rise early in the afternoon, and at seven it generally reaches 104°; in the morning it is about normal. The pulse varies correspondingly, ranging between 80 and 105. The eruption does not reappear as it gradually fades away; other symptoms continue. To take spirits of nitrous ether and solution of acetate of ammonia, of each, half a drachm, every four hours, alternating with quinine (two grains).

September 13th. The temperature reached about 105° and the pulse 110 in the evening, both becoming normal before morning. Some delirium; bowels kept open by laxatives and enemata. The eruption has disappeared. With a view to break up the evening exacerbations, Dr. Thayer ordered twenty grains of quinine in divided doses between 11.45 A. M. and 12.15 P. M.

September 14th. Temperature 105° last evening; pulse 100. To take thirty grains of quinine in divided doses between 11.15 and 11.45 A. M.

September 15th. Temperature 104° last evening; pulse 92; both normal this morning. To take thirty-two grains of quinine between 11.15 and 11.45 A. M.

September 16th. Temperature 104.7° last evening; pulse 92; both nearly normal this morning. It will be seen that the quinine made but a slight change in the temperature, which continued to rise and fall for thirty-three days, the average evening temperature being 103.2° ; the morning 99.2° , making a difference of 4° . The treatment otherwise was expectant, and at the end of the time mentioned the patient was convalescent, and made a good recovery.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JAN. 8, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	547	27
Philadelphia	800,000	391	25
Brooklyn	500,000	254	26
Boston	342,000	154	23
Providence	100,700	22	11
Worcester	50,000	13	14
Lowell	50,000	24	25
Cambridge	48,000	23	25
Fall River	45,000	18	21
Lawrence	35,000	11	16
Lynn	33,000	12	19
Springfield	31,000	8	13
Salem	26,000	7	14

Normal Death-Rate, 17 per 1000.

BOOKS AND PAMPHLETS RECEIVED. — Note-Book for Cases of Ovarian Tumors and other Abdominal Enlargements. By Dr. H. Lenox Hodge. Philadelphia: Lindsay and Blakiston. 1875.

Medical Diagnosis with Special Reference to Practical Medicine. By J. M. Da Costa, M. D. Fourth Edition, revised. Philadelphia: J. B. Lippincott & Co. 1876. (For sale by A. Williams & Co.)

Wiblingen. Its Baths and Mineral Springs. By Dr. A. Stoecker. London: Trübner & Co. 1875. (Received from E. Steiger, New York.)

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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AN ANALYSIS OF FIVE THOUSAND CASES OF SKIN DISEASE,

WITH REMARKS UPON SOME OF THE PRINCIPAL GROUPS AND CASES.

BY JAMES C. WHITE, M. D.,

Professor of Dermatology in Harvard University.

FIRST PAPER.

THESE cases are taken from the records of the out-patient department for skin diseases of the Massachusetts General Hospital, and they include, in consecutive order, all the cases which have been treated there during the past six years. The value of such analyses, incomplete they necessarily are in many respects, is still great, as they yield valuable information concerning the ætiological relations of many cutaneous diseases, and furnish the data for comparing the prevalence of these affections in various countries. The publication of similar reports, even when consisting of mere lists, in the principal cities of the Old World and our own by competent dermatologists, has established the fact of remarkable variation in the occurrence of certain affections, for which as yet no satisfactory explanation has been discovered. Other cutaneous diseases seem to be under the action of a law which works alike among all classes and nations; while on the other hand local influences of climate and customs are found to be productive of distinct types of affections of the skin. These questions of geographical and race influence should form one of the most important subjects of discussion at the dermatological section of the coming centennial international medical congress at Philadelphia.

The establishment of special departments for skin diseases in connection with the dispensaries of the large hospitals of our great cities during the past few years has made the collection of such data possible, but has done very little besides this for the advance of the study of dermatology. We still lack the opportunities of hospital accommodation for this class of patients, which is so essential for the complete study and treatment of these affections. The dermatologist in charge sees, and can show for a moment to the student, great numbers of cases, it may be, in a year, but the faculty of a snap diagnosis thus taught and ac-

quired is but a small part of the subject. A knowledge of the natural progress of disease and of the modifications affected in it by treatment can be acquired only by daily observation of individual cases under the complete control of the teacher. This is the knowledge which makes the understanding and successful treatment of skin diseases possible, and it can be acquired only by the establishment of wards for their exclusive care. Without them the dermatologist of America is deprived of advantages for self-improvement and instructing which his foreign brethren have long been provided with; our students must seek abroad the means of perfecting themselves which are denied them at home; and the pitiable subjects of these distressing affections must suffer from such unequal distribution of hospital charity.

The class of cases presenting themselves for treatment at the skin department of the Massachusetts General Hospital, represented below, is different in some respects from that found in some other dispensaries, as it is drawn from a wider district, patients coming to it from a large portion of New England. The relative preponderance of foreigners over natives is thereby considerably reduced, and the proportion of serious over trivial affections correspondingly increased, as the number of the latter seeking relief from a distance is naturally small. The nature of the cases, however, is as diverse as is usually presented in such lists, representing, as they do, such various relations of life; for it is by no means the poor alone who avail themselves of the gratuitous advice of the department. Most notable differences, however, will be discovered in the character of the diseases by comparing the list below with those drawn from the private case-book of the dermatologist; the extremes being, on the one hand, the representatives of poverty and filth, on the other of luxury and the refinement of bodily care. But no one without the experience derived from the study of both classes can form an intelligent opinion of the nature of the cutaneous diseases of any community.

There is a most necessary preliminary question to be settled in the preparation of an analysis of this sort, that, namely, of nomenclature and classification. Such a necessity is the great misfortune of dermatology, for until it has a fixed language of terms which can be universally understood and used, there can be no greater chance of establishing it upon a stable and working basis than there was of erecting the structure of Babel. Nearly every dermatologist feels at liberty to invent new and change old names, and some are not satisfied long even with those of their own creation. Titles to be understood, should be written not only with the author's initial after them, as those in zoölogy and botany, but with the date of issue as well. A large part of a lecture to students on any of the common affections of the skin must be wasted in attempting to explain and reconcile such differences of nomenclature as occur even in their common text-books on the subject. It is hard to say whose is

the whole fault of such confusion ; it certainly is not inherent in dermatology itself. One reason for it, no doubt, is the constant attempt of individual authors to correct it by substituting a system of their own invention as a panacea. Such efforts are worse than useless, for they only add a new element of discord for future elimination. There is but one way, as it seems to me, out of the maze ; that is, the establishment of an international committee on the subject, to be appointed by a congress of dermatologists from all parts of Europe and America, who by mutual concessions shall agree upon a system of nomenclature and classification, which shall be adopted and left inviolate by individual writers, and altered only at future sessions of the congress, to which all proposed changes and additions shall be referred. Such a plan should not be impracticable, at least so far as concerns nomenclature, and in view of the universal dissatisfaction with the present state of affairs, would, I believe, be eagerly entertained. This question, too, certainly should receive the earnest consideration of the committee having in charge the organization of the section of dermatology of the centennial congress.

In want of such a key at present, however, what plan shall be followed in the registration of the cases to be published below, that the names employed may convey to readers everywhere the exact nature of the cases? Evidently one which is already clearly understood and most widely distributed. In selecting, therefore, as best adapted for such purpose, the system of Professor Hebra, I shall succeed in informing every dermatologist who may chance to see them of the character of the affections contained in the following lists, even if I do not wholly agree with that distinguished teacher as to the proper position and name of some of them. Such exceptions will, however, be more appropriately considered in subsequent papers upon some of the principal groups and remarkable cases tabulated below. It will be understood, therefore, that the diseases arranged alphabetically, for convenience' sake, in Table I. are mainly those described by Hebra under the titles there used ; and that in Table II. they are grouped in accordance with his system of classification.

That the sum of these diseases therein enumerated will be found somewhat larger than the number of patients given, is explained by the fact that some of them were affected by two or more of the diseases at one time.

The sex and nationality of the patients were as follows : Men, 1414 ; women, 1678 ; children under fourteen years, 1908 ; of native stock, 1885 ; of foreign stock, 3115.

TABLE I. — DISEASES ARRANGED ALPHABETICALLY.

Abscess	6	Melasma	1
Acne	348	Milium	3
Alopecia	13	Molluscum contagiosum	9
Alopecia areata	17	Molluscum fibrosum	2
Ambustio	7	Morbilli	1
Bromidrosis	1	Musquito poisoning	53
Chloasma	16	Nails, disease of	5
Comedo	3	Nævus vascularis	18
Condyloma	2	Pemphigus	15
Cornu cutaneum	1	Pernio	7
Dermatitis	34	Phtheiriasis capitis	216
Ecthyma	55	Phtheiriasis corporis	48
Eczema	2242	Phtheiriasis pubis	7
Elephantiasis Arabum	5	Pruritus	50
Epithelioma	25	Psoriasis	152
Erysipelas	52	Purpura	19
Erythema exudativum multi- forme	73	Rhus poisoning	20
Erythema nodosum	8	Scabies	139
Folliculitis (heat)	12	Scarlatina	1
Furunculosis	65	Scleroderma	4
Herpes	28	Scrofuloderma	27
Herpes zoster	73	Sebaceous cyst	2
Hirsuties	1	Seborrhœa	55
Hyperæsthesia	2	Syphiloderma	327
Hyperidrosis	5	Tinea favosa	17
Hypertrophied scars	3	Tinea tonsurans	180
Ichthyosis	5	Tinea versicolor	81
Impetigo	19	Tyloma	2
Keloid	11	Ulcer	309
Lentigo	1	Urticaria	132
Leprosy	1	Varicella	22
Leucoderma	1	Varix	2
Lupus	11	Verruca	14
Lupus erythematosus	6	Xeroderma	13
Maculæ atrophicæ	1	Xanthoma	2
		Imperfect diagnosis	108

TABLE II. — DISEASES ARRANGED UNDER HEBRA'S CLASSES.

Class I. Hyperæmiæ.

Class II. Anæmiæ.

Class III. Disorders of the glands, 91.

Sebaceous Glands: Seborrhœa, 55; xeroderma, 13; molluscum contagiosum, 9; milium, 3; comedo, 3; sebaceous cyst, 2.

Sweat Glands: Hyperidrosis, 5; bromidrosis, 1.

Class IV. Exudative diseases, 3561.

Varicella, 22; measles, 1; scarlatina, 1; erythema exudativum multiforme, 73; erythema nodosum, 8; urticaria, 132; dermatitis calorica, 26; dermatitis traumatica, 2; dermatitis venenata, 73; dermatitis erythematosæ, 86; dermatitis phlegmonosa, 71; herpes, 101; pemphigus, 15; psoriasis, 152; eczema, 2242; scabies 139; acnè, 348; impetigo, 19; ecthyma, 55.

Class V. Hæmorrhages, 19.

Purpura, 19.

Class VI. Hypertrophies, 40.

Pigment: Lentigo, 1; chloasma, 16; melasma, 1.

Keratoses: Tyloma, 2; ichthyosis, 5; verruca, 14; cornu, 1; condyloma, 2; hirsuties, 1; scleroderma, 4; elephantiasis Arabum, 5.

Class VII. Atrophies, 37.

Leucoderma, 1; maculæ atrophicæ, 1; alopecia, 30; atrophy of nails, 5.

Class VIII. Benign new growths, 38.

Keloid, 11; hypertrophied scars, 3; molluscum fibrosum, 2; xanthoma, 2; nævus vascularis, 18; varix, 2.

Class IX. Malignant new growths, 70.

Lupus erythematosus, 6; lupus vulgaris, 11; scrofuloderma, 27; leprosy, 1; epithelioma, 25.

Class X. Ulcerations, 309.

Ulcers (non-syphilitic), 309.

Class XI. Neuroses, 52.

Pruritus, 50; hyperæsthesia, 2.

Class XII. Parasitic, 549.

Vegetable: Tinea tonsurans, 180; tinea versicolor, 81; tinea favosa 17.

Animal: Phtheiriasis capitis, 216; phtheiriasis corporis, 48; phtheiriasis pubis, 7.

Cutaneous syphilides. Acquired, 264; congenital, 63.

Uncertain diagnosis, 108.

RAPID DILATATION OF THE FEMALE URETHRA.

BY GEORGE JEWETT, M. D., OF FITCHBURG, MASS.

THE art of exploring the female bladder, for the removal of foreign bodies as well as for therapeutical purposes, has received a great impetus through the valuable clinical lectures of Professor Simon, of Heidelberg, published in the *New York Medical Journal* for October, 1875. The following is the report of a case recently under my care, illustrating the safety of rapid dilatation of the female urethra. The patient was a well-grown girl of fifteen, who stated that she had introduced the handle of a crochet-needle through the urethra into the bladder some four days before I saw her. She further remarked that repeated and prolonged but unsuccessful efforts had been made by two different physicians for its removal. The subjective symptoms were those of stone in the bladder, namely, violent bearing-down pains (simulating labor pains) and incontinence of urine.

A digital examination per vaginam verified her statement. Placing my hand upon the supra-pubic region, I clearly detected through the abdominal wall the fundus of the bladder most prominent at a point two inches to the left of the median line, and about two inches from the pubes. There was a good deal of tenderness of the vesical peritoneum and left iliac region, and a continued desire for micturition. I at once explored the bladder with a sound, and readily detected the foreign body, but found it firmly fixed at both extremities, and any effort to move it caused great pain.

I determined, without further delay, to make a digital exploration of the bladder. That my purpose might not be interfered with, I administered ether to insensibility. I introduced a No. 16 male sound, which was just the size of the tip of my finger, and followed its introduction by the index finger, previously well lubricated. A rotary motion with moderate force brought the finger to the base of the second phalanx, when further dilatation without danger of rupture seemed impossible. The bladder was entirely free from urine, and I could easily reach the foreign body, but found both extremities firmly imbedded in the vesical walls. The lower extremity was two inches to the right of the meatus, and while endeavoring to lift it out of the base of the bladder, I noticed a sudden rupture of the meatus, which had previously girded the finger so tightly as to forbid much motion, and at once the finger was at perfect ease. After some difficulty I succeeded in introducing the fingernail under the point of the needle-handle, and the finger being gently withdrawn the vesical contraction forced the intruding body far out of the meatus. There was moderate hemorrhage, which ceased spontaneously in a few minutes. The rupture was obliquely downward to the left, from

the floor of the urethra, and externally about four lines in depth. After the patient had recovered from anæsthesia she was removed a mile away to a friend's house. During the first half-day micturition was as frequent as every hour, and during the following night about once in two hours, and without much pain. Incontinence ceased immediately after the operation. The patient was put in bed; opiates were given, and fomentations ordered to the pubic region. In a week the patient went to her home in the country, feeling quite well.

In two weeks from the time of the operation the mother called to say that her daughter had fully recovered, and that she was not suffering in any respect from her foolish act.

Two questions naturally present themselves in connection with this case: first: What is the extreme bloodless dilatability of the female urethra? and, second, To what extent can rupture be carried without danger in its sequences? Authorities differ widely as to the bloodless dilatability of the female urethra. Dr. Poland, in Guy's Hospital Reports, cites the case of a girl of eighteen, whose urethra dilated spontaneously so as to allow of the passage of a calculus which weighed 8.8 drachms, and which required a circumferential dilatation of 9.8 centimetres; the dilatation was followed by no bad consequences. Dr. Poland relates a case in his own practice in which he removed a calculus measuring in its least circumference 11.8 centimetres, and weighing 651 grains; there was no incontinence or other ill effect. Sir Astley Cooper says that bloodless dilatation of the female urethra is harmless, and then, in apparent contradiction, cites cases which were followed by permanent incontinence. Among the French, Hybord states that dilatation must not be carried beyond four centimetres in circumference. Professor Simon, in summing up his observations, remarks that dilating plugs may be used in the adult female urethra, not exceeding 6.3 centimetres in circumference. In order to avoid the dangers of rupture, Professor Simon advises two incisions in the meatus: one superiorly, of one fourth a centimetre, the other inferiorly, of one half a centimetre. As the point of greatest obstruction is directly at the meatus, which is covered by the mucous membrane of the vagina and vestibule, slits in the manner described allow the finger to extend much farther into the bladder than would otherwise be possible. Liston advises four incisions. Chelius cut downward alone, with good results.

In the present instance the index finger passed to the base of the second phalanx, at which point it measured 5.7 centimetres in circumference; but when the finger attained the circumference of 6.3 centimetres, rupture occurred. As to the extent to which rupture can be carried without permanent injury, I find almost no results recorded. A very few cases are reported in which more or less extensive lacerations resulted from the extraction of large calculi, followed by permanent in-

continence, but many more are reported of bloodless dilatation which were followed by this dreaded result.

Professor Simon's view that a tolerably free enlargement of the meatus with the knife is a positive safeguard against incontinence suggested to my mind that a like operation might possibly prove a cure for that malady.

RECENT PROGRESS IN PHYSIOLOGY.¹

BY H. P. BOWDITCH, M. D.

TRANSFUSION (continued).

THE above-mentioned observations of Landois² explain the occurrence of death as observed by Naunyn³ in the case of rabbits into whose veins "lake-colored" or "laky"⁴ blood had been injected. Thrombosis of the right heart and of the pulmonary artery was found to be the cause of death in most of these cases.

These observations have been confirmed by Plósz and Györgyai,⁵ who also noticed that the coagulation of blood withdrawn from the body may be greatly hastened by the addition of laky blood.

Similar results were obtained by Jakowicki,⁶ who found that in whatever way blood was rendered laky (whether by repeated freezing or by addition of ether or by shaking up with water), its transfusion into animals of the same species as that from which the blood was taken produced death, from the formation of coagula in the vessels and particularly hæmorrhagic infarction of the lungs. In dogs, hæmaturia was a constant and convulsions an occasional symptom. It will be seen that these symptoms and post-mortem appearances are similar to those above described as observed after the transfusion of foreign blood, and there can be no reasonable doubt that the pathology is the same in both cases. It is interesting, however, to notice that Fiedler and Birch-Hirschfeld⁷ were unable to discover any solvent action of human serum on lamb's-blood globules or of lamb serum on human globules. As the same observers noticed hæmaturia as the result of lamb's-blood transfusion into their phthisical patients, it is probable that their failure to observe a solvent action in the mixed bloods depended upon their not having reproduced outside the body the conditions prevailing within the body which were necessary for the development of this action.

¹ Concluded from page 72.

² *Boston Medical and Surgical Journal*, January 20, 1876, page 70.

³ *Archiv für experimentelle Pathologie*, i. 1.

⁴ That is, blood in which the coloring matter is not contained in the globules but diffuses through the plasma.

⁵ *Archiv für experimentelle Pathologie*, ii. 4.

⁶ Reported in *Centralblatt für die medicinischen Wissenschaften*, 1875, page 376.

⁷ *Deutsches Archiv für klinische Medicin*, 1874.

Another symptom mentioned by several observers as caused by transfusion of foreign blood is bleeding from the wound and from mucous surfaces. This is not a blood-colored exudation but a genuine hæmorrhage. The explanation of the phenomenon is not evident. It may be partly dependent on increased blood-pressure in certain vessels caused by the obstruction of neighboring channels by coagula. Worm Müller, however,¹ is inclined to attribute it to a weakening or solvent action of the foreign blood on the walls of the blood-vessels.

As a circumstance contributing to a fatal result in many cases of transfusion of foreign blood should be mentioned the interference with the renal functions caused by infarction of the blood-vessels, and the obstruction of the tubules by a blood-stained granular mass, as has been described by several observers. It is possible that the convulsions observed by Jakowicki² may have been due to uræmia caused in this way.

It will next be of interest to consider what becomes of the blood which is transfused into the vessels of an animal already containing a normal amount, the injected blood being from an animal of the same species. This question has been very carefully studied by Worm Müller.³ He finds in the first place that, after increasing the blood-volume of a dog eighty-three per cent., about one half of the transfused blood disappears from the vessels within a few hours, and that within two to five days the blood-volume has returned to its normal amount. The different constituents of the blood do not, however, disappear with equal rapidity. If the blood of the animal is examined two or three days after the transfusion by the method of Malassez⁴ the relative number of blood-globules is found to be greatly increased. At the same time there is found to be a considerable increase of urea in the urine. It seems evident, therefore, that of the extra blood thus injected into the vessels, the plasma is rapidly exuded and its albuminoid constituents decomposed, while the blood-globules are retained for a certain length of time unchanged. Exactly how long this increased "globular richness" can be maintained is not precisely determined, but it seems probable that it may last for several weeks.

INDICATIONS FOR TRANSFUSION.

Looking at the practical question of transfusion in the light of the above-described physiological investigations, Panum has recently⁵ considered the conditions in which transfusion is indicated. Regarding the blood as a fluid tissue which does not contain at any one time⁶ a great

¹ Transfusion und Plethora, page 115.

² See above.

³ Transfusion und Plethora.

⁴ Boston Medical and Surgical Journal, xc. 87.

⁵ Virchow's Archiv, lxiii. 1.

amount of nutritive material, but which serves as a medium for transporting nutritious substances from the intestines to the tissues, he maintains that transfusion is not to be undertaken with a view of nourishing the body. He points out that of the transfused blood the blood-globules are retained in the vessels for a considerable time, and therefore do not serve as nutritive material, while the albuminoid materials of the plasma, which are really decomposed, are present in too small amount to be of any importance. He shows, too, that the daily loss of weight observed in a starving dog is increased instead of diminished by transfusion, perhaps in consequence of an increased supply of oxygen introduced by the more numerous blood-globules. The statements made by various observers that starving dogs can be kept alive by transfusions he regards as erroneous, for dogs often live four weeks without food, and it has not been claimed that they can be kept alive by transfusions for any greater length of time. In this connection it is interesting to notice the results arrived at by Tschiriew (in an article to be published in the next volume of Ludwig's *Arbeiten*, who introduced equal amounts of defibrinated blood alternately into the stomach and into the blood-vessels of a dog, and determined the effect on the excretion of urea of each of these operations. He found that, while the giving of blood as food caused the excretion of a quantity of urea containing an amount of nitrogen almost precisely equal to that of the ingested blood, the transfusion of blood caused a comparatively very small increase in the urea excretion.

The fact that the blood-globules of the transfused blood are retained for a considerable time in the blood-vessels indicates, according to Panum, the only class of cases where transfusion can be of use, namely, those where there is a deficiency of these oxygen-carrying elements; for example, after exhausting hæmorrhages, in cases of anæmia, chlorosis, etc. Since the blood of animals (except perhaps that of apes), to say nothing of the danger attending its employment, is unable to meet the single rational indication for transfusion, namely, the deficiency of red blood-globules, its introduction into human blood-vessels should, according to Panum, be entirely abandoned.

These views of Panum are opposed by Hasse,¹ who maintains that an important use of the transfused blood is to supply to the glands which furnish the digestive fluids the materials which enable them to perform their functions. In a condition of chronic inanition the blood is unable to supply this material, and the digestive functions are therefore enfeebled or suspended. If, now, the glands can be once brought into action again, digestion will be resumed and the blood thus restored to its natural condition. This object can, according to Hasse, be accomplished by the transfusion of an amount of lamb's-blood too small to pro-

¹ Virchow's Archiv, lxiv. 243.

duce the dangers which have been described by Panum, Ponfick, and Landois. He recommends direct transfusions by means of a small canula, to avoid the introduction of too great an amount of blood at once.

Cases in which the watery constituents of the blood are deficient, as in cholera, seem to demand the transfusion not so much of blood as of any fluid which will float the blood-globules, and enable them to perform their functions. It has in fact been found by Netter¹ that transfusions of water are quite as beneficial as those of blood, salt solutions, etc.

As the result of all these investigations, it may be said that the transfusion of animal blood into the human circulation is attended by a certain degree of danger. Human blood, where procurable, should therefore be preferred. In regard to the question of direct or indirect transfusion, it should be borne in mind that one of the chief advantages claimed for the method of direct transfusion from vein to vein over that of injecting defibrinated blood by means of a syringe is that the blood thus transfused contains all its usual constituents. It is, however, the almost unanimous opinion of investigators of this subject that no difference in the effect, either for good or for evil, is to be found between defibrinated and undefibrinated blood. In view, therefore, of the possibility of the formation of coagula in the tubes used for direct transfusion, and the difficulty² of correctly estimating the amount transfused, the indirect method seems upon the whole preferable.

In this connection is to be mentioned a method proposed by Nicolas Duranty,³ for transfusing undefibrinated blood by the indirect method. Taking advantage of the fact that cold delays coagulation, he catches the blood in a cold vessel and injects it by means of a cold syringe. In a series of experiments performed on animals he found that no disagreeable symptoms followed the injection of the cold blood. Worm Müller also⁴ mentions the fact that exposure to a temperature of from 3° to 4° C. does not act injuriously upon the red blood-globules.

As bearing upon this question of the resistance of blood-globules to low temperatures, it is interesting to notice the observations of Horvath⁵ on hibernating animals. The temperature measured in the rectum of a marmot sleeping in an atmosphere of 2° C. was found by this observer to be the same as that of the surrounding medium.

¹ Gazette des Hôpitaux, 1873, No. 139.

² This is reduced to a minimum by the apparatus of Aveling. See JOURNAL, xci. 31.

³ Gazette hebdomadaire de Médecine et de Chirurgie, 1874, No. 9.

⁴ Transfusion und Plethora, page 61.

⁵ Centralblatt für die medicinischen Wissenschaften, 1872, page 706.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

CHARLES W. SWAN, M. D., SECRETARY.

NOVEMBER 13, 1875. The society met at the house of DR. INGALLS.

Vice-President SINCLAIR, and afterwards, Vice-President ABBOT, in the chair.

Puerperal Convulsions. — DR. LYMAN read the following interesting report by Dr. S. K. Towle, of Haverhill, of three cases of puerperal convulsions treated by morphia: —

"CASE I. At three A. M., August 31st, I was called to Mrs. C., aged twenty-eight, for the first time professionally. I found her suffering most intensely from pain in the region of the stomach, with now and then complaints of darting pains in her head, arms, and back. I learned that she was eight months advanced in her fourth pregnancy, but nothing in the character of this attack caused her to suspect that she was about to be confined. I immediately gave her one third of a grain of morphia hypodermically, and had hardly withdrawn the needle when she went into a severe convulsion. On examination, I found the os dilated so as to admit the finger, and immediately commenced efforts at dilatation with the fingers of one hand, while firm pressure was made at intervals over the uterus with the other hand. This was continued until delivery was accomplished, and I do not think there was a single labor pain, of sufficient power to do any good, that was not excited by my manipulations. After the first convulsion I got some of her urine, and on examination found it heavily loaded with albumen. A second convulsion occurred an hour after the first, when I repeated my morphia injection, and also used chloroform so as to partially control her restlessness under my manipulations. After the first convulsion she was sufficiently conscious to answer simple questions. A third and a fourth convulsion came on at intervals of less than an hour, but at about half past six (A. M.) the child was born, and though apparently dying, it revived and still lives. After the birth of the child there was considerable bleeding, so that I had to firmly compress the womb for an hour, during which time there was only a partial return of the patient to consciousness. About two hours after delivery, a fifth convulsion came on; and, before I reached her (I had been called away), three fourths of an hour later, a sixth and very severe one occurred. Dr. Cogswell, of Bradford, now saw the patient with me, and we both concluded that her chances of living were almost gone; she was in a profound coma, with stertorous breathing, pulse of 130 to 150 and very feeble, and an ashy hue of the countenance apparently indicating immediate dissolution. Dr. Cogswell advised against more morphia, to rely upon stimulants if she could at any time swallow, and to use ether if needed. Shortly after Dr. Cogswell left, the patient became somewhat restless, and I feared another convulsion. It seemed to me that she could not survive many more, and that therefore I must at all hazards prevent, if possible, a return; so, with many doubts and fears, I gave her about half a grain of morphia hypodermically. This was at about half past ten, and she lay quiet until the middle of the afternoon, when she roused up enough to swallow.

"She had no more convulsions. She slowly but steadily gained, but has

no recollection of the first week of her illness. She says she remembers at my first visit seeing me prepare to give her an injection, but has no recollection that I gave it to her.

"On looking back over this case I am convinced that I used morphia too timidly at first. The fact that she had the first convulsion immediately after the first morphia injection undoubtedly influenced me somewhat (as well as the friends a great deal), although I knew there had not been time for the morphia to have its effect. If Mrs. C. had been well under the influence of morphia after delivery, I am confident there would have been no more convulsions, and thus the most dangerous part of the case would have been avoided.

"CASE II. September 29, 1875, since I was called by my brother, Dr. M. C. Towle, to a case of convulsions in a woman of twenty, eight months advanced in her first pregnancy. At five P. M. she had the first convulsion, and an hour later a second; soon after this, my brother saw her and gave half a grain of morphia hypodermically. During the night she had six more convulsions and got two more injections, not quite as large. Meantime efforts were made at short intervals at dilatation and inducing pains, and at six A. M. forceps were used. The child gasped a few times only, and the mother is making a good recovery. Ether was used somewhat in this case to control uneasiness under manipulations. Urine was drawn before the forceps were introduced, and was found charged with albumen; there was also, as in the case of Mrs. C., much 'bloating,' which in both cases soon disappeared after delivery.

"I have recently been most agreeably disappointed in a third case in which I expected convulsions. Albuminuria existed for six weeks, the quantity of urine being very small. The swelling became so general and extreme that three weeks before delivery I made two punctures with a thumb lancet in both feet and both legs. Gallons — the patient says 'pailsful' — drained away, affording great relief to breathing. The labor was normal, and the mother and child did well, though the mother's convalescence was slow."

DR. BUCKINGHAM remarked that ten years ago the use of opiates in puerperal convulsions was considered a matter of very doubtful propriety, if not positively objectionable; but, of late, opiates were more in use and in better esteem. During the past year he had had two or three cases in which, from the presence in the urine of albumen and casts, he had feared convulsions. The patients were all treated largely with morphia, never to the extent to which it was used by Dr. Towle, but with small doses by the mouth from the beginning of the treatment. They all escaped convulsions, and recovered. The children were all still-born.

A Case of Painful Micturition cured after a Successful Operation for Hæmorrhoids. — DR. INGALLS read the following: —

"Mrs. C. is the mother of three children, the youngest of whom was born in March, 1875, and lived three months. For about six weeks before I saw her (July 15, 1875), the patient had had much pain at the times of micturition, which had been frequent and during from five to fifteen minutes after each time it was described as excruciating and always causing tears to flow. After she had suffered about two weeks, her physician in Brooklyn, where she lived, performed some kind of an operation by taking away or cutting off something

from her urethra; the pain of the operation did not amount to much; she walked from the physician's office after it; there was scarcely a drop of blood. The substance cut off was not shown to her; for two or three days after this she thinks she was better of her trouble, but it then returned worse, if possible, than before.

"The patient reported to me that since the birth of her last child she had been much constipated, that she had frequently used enemata and also laxative and sometimes cathartic drugs, that she was obliged to arise frequently in the night-time, that she had lost flesh and strength, and that she was ready to accept any treatment which would give promise of relief, for her condition was unendurable.

"Upon examination, I found absolutely no abnormal condition of the urethra or of the vulva; nor was there a cicatrix discernible; pressure over the tract of the urethra caused no pain; the position and condition of the uterus were normal. Examination of the anus disclosed three angry-looking external hæmorrhoids, which I proposed to treat by a surgical operation, and consent to this was gladly yielded. Desirous of being absolutely certain that the urethra was not the seat of disease, and also of ascertaining, if possible, what surgical operation had been done four weeks before, the urethra was dilated so that a finger was introduced throughout the tract; there was no evidence of disease or of cicatrization disclosed, and there was confirmation of this by Dr. C. D. Homans, who kindly assisted me. The patient was under ether. The hæmorrhoids were cut off with scissors, and the wounds treated with fuming nitric acid. This was done on the 19th of July, and on the 24th the patient left her bed; on the 27th she was dressed and up all day, and on the 3d of August the wounds were almost entirely healed. After three days she experienced no pain, trouble, or difficulty in micturition.

"Hewitt says, 'Frequent painful micturition may be propagated from the rectum as when hæmorrhoids are present. Cases in which hæmorrhoids have to do with disturbance of the function of the bladder not seldom remain for some time obscure.'

Cases of Twins. — DR. SWAN read the cases:—

"Mrs. S., aged thirty-four, married eight years, miscarried seven years ago. Four years ago she was delivered of twins, male and female, still-born. The first presented, on the first examination, the anterior superior spinous process of the right ilium, the right hypochondrium and intervening integuments, and the left foot. The position was essentially posterior dorsal. The foot was drawn down and used for occasional traction; the breech rotated to the left, and was made anterior; a loop of cord was drawn down, firm pressure was produced over the pubes, the arms were swept down over the face, and an effort made to retain the chin upon the breast by inserting the left forefinger in the child's mouth. The head, however, did not follow the trunk, and was delivered with the forceps as soon as possible, but the delay was sufficient to destroy the life of the child, notwithstanding prolonged efforts at resuscitation. The second child presented a knee, as felt through the unruptured membranes, and was delivered dead, twenty-four hours later, in a manner, as I was told by the regular attendant, similar to that of the first. The placenta were two, connected by

membrane only, and having each a cord centrally attached. Severe hæmorrhage followed the delivery.

"About four years later, namely, in October, 1875, I attended the patient in her third labor, the second at full term. Two living children, males, were born within half an hour of each other, and by the natural efforts. The presentation of the first was right fronto-parietal, as attested by the caput succedaneum, which was oval, its long axis parallel to the sagittal suture; the vertex was posterior when the head was delivered. The second child was born in the first or second vertical position. The two placenta were perfectly coalescent, and, except slight depressions in the margin on the line of union, formed together one large circular disk. There were two distinct membranous cavities. The partition membrane was double, and the two layers, though coherent, could be separated without violence to either. A cord sprang from the centre of each half of the placenta. The aggregate weight of the children was between sixteen and seventeen pounds.

"Before the present labor, in view of the patient's history and her very prominent, almost pendulous abdomen, careful attempts were made to decide by auscultation the question of twin pregnancy. But one foetal heart could be found. This was beating at the right of the umbilicus, at the rate of 152 per minute.

"The following are the facts, pertinent and otherwise, in the family history of both parents: The patient's maternal uncle was father of thirteen children two of whom were twins. Another uncle on the mother's side was likewise father of thirteen children, two of which were twins. One of these uncles had a daughter who had four children, two of which were twins. The same uncle had a son who was father of triplets. A third maternal uncle had a daughter who was mother of seven children, the last two of which were twins. A maternal aunt had nine children, two of which were twins. Another maternal aunt had a daughter who miscarried with twins three or four times. She was the mother of nineteen children in all, including miscarriages, but never had twins at full term. The patient's mother's aunts had twins among them, the number and distribution not known. The patient's mother's grandfather was one of twins, and he had been heard to speak of twins even remotely antecedent.

"On the side of the patient's husband the facts ascertained are as follows: The maternal grandmother was one of twins, had two pairs of living twins, and miscarried twins once at six months. A paternal uncle was father of twins.

"The mother was one of twins, and gave birth to twins once. The patient and her husband were born singly.

"Taking these two persons as the centre, a circle of relationship which includes grandparents, aunts, uncles, and cousins gives the production of twins fifteen times and of triplets once."

Puerperal Convulsions. — DR. SINCLAIR reported the case. In October he had been called to a young woman in convulsions, in the seventh month of the first pregnancy. Her face and lower extremities had been swollen for two or three months, and especially during the three or four weeks immediately before her confinement. For three or four days before the visit there had been a good deal of headache. There had been no diminution or increase of the

urine, and the bowels were regular. On the day of the convulsions the patient grew gradually blind, and was totally so before the first convulsion. When he arrived she had recovered from the second attack. Her face was swollen, her tongue bitten, and her speech thick. Another severe convulsion, as severe as any he had ever seen, and, later on, another, still more severe, occurred. With the assistance of Dr. Doe the patient was etherized, and the os, which was undilated, was opened by manual dilatation. The whole process of delivery occupied about an hour and a half. There was no effort on the part of the womb. The vaginal entrance was small, and the neck of the uterus, a small portion of which was torn in the delivery, was exceedingly dense and hard. The child lived about half an hour. There were no more convulsions, although the pulse continued very rapid, and the abdomen was exceedingly swollen and of brawny hardness, and for several days after delivery was exceedingly tender. The albumen, which at first constituted about two thirds of the urine, gradually diminished, and in ten days had entirely disappeared, and the patient did well.

Acute Albuminuria following Delivery. — DR. RICHARDSON reported the following case. October 18th, he was called to see a married woman, twenty-eight years of age, who was about to be confined with her second child. He saw her for the first time about eleven o'clock in the evening, the pains having begun two hours before. After a perfectly normal labor a male child (seven and a quarter pounds) was born about two o'clock, the whole labor not exceeding five hours. The patient rested well during the following day, and everything promised a perfectly normal convalescence. On the morning of the 20th, however, a slight œdema of the face was noticed, and the patient complained of some headache. The pulse was 100, the temperature 99.6° . At four P. M. the headache had increased, the pulse had risen to 120 and the temperature to 101° . The nurse reported that the patient had not passed any urine for over eighteen hours. Accordingly about ten ounces of urine were drawn with the catheter. An examination showed a small amount of albumen and a few granular and epithelial casts. Bromide of potassium (thirty grains) was ordered, with directions to repeat the dose in three hours. Ether was only obtained for use in case convulsions should occur.

October 21st, $7\frac{1}{2}$ A. M. The pulse was 140, the temperature 105° . The headache was very severe; there was marked irritability of temper, and restlessness. The nurse reported that the patient had slept none since midnight. The skin was hot and dry. Three ounces of urine were drawn, and a subsequent examination showed a very large amount of albumen and numerous casts. The bromide of potassium was omitted, and sulphate of morphia (one sixth of a grain) was ordered to be taken every two hours. At twelve o'clock the pulse was 144, the temperature 105.2° . An ounce and a half of urine was drawn; it was of the same character as at the last report. The headache still continued, but the patient was not so restless. The morphia was ordered every three hours. At six o'clock the pulse was 120, the temperature 102° ; the skin was decidedly moist; the headache was somewhat relieved; the patient's general appearance was more quiet. Eight ounces of urine were drawn by the catheter. A subsequent examination showed a less amount of albumen

and possibly fewer casts. At ten o'clock the patient reported herself free from headache. The skin was very moist. The pulse was 100, the temperature was 101°. Ten ounces of urine were drawn, which contained decidedly less albumen, and a very few casts could be detected by the microscope. The nurse reported that the patient had dozed some since the last visit; the morphia was omitted.

October 22d. The patient had slept considerably during the night, and was in every way decidedly better. The pulse was 80, the temperature 99°. She had passed her water about midnight. Eight ounces of urine were drawn by the catheter, and only a slight trace of albumen could be detected, and no casts were found. At four o'clock the patient seemed perfectly herself again. Six ounces of urine were drawn by the catheter, but no albumen could be detected. From that time the history of the case presented nothing unusual. The patient sat up on the fifteenth day. No deviations in the milk or lochia were noticed during the progress of the case, except a slight factor of the latter, for which carbolic-acid injections were ordered.

Unavoidable Hæmorrhage. — DR. BUCKINGHAM gave some points in a case not yet finished, that of a young woman nearly eight months pregnant with her first child. He was first called to her at the end of the third month, on account of severe uterine hæmorrhage. The patient was very anxious to have a child, but it was supposed that she had miscarried. The hæmorrhage was excessive for twenty-four hours, and then passed off gradually, whereupon Dr. Buckingham changed his opinion as to miscarriage. This morning (November 13, 1875) he was sent for in haste. On getting out of bed the patient had found the sheets bloody, and a large coagulum was discharged at the time of micturition. There was no pain. The motions of the child were very active. The umbilicus was flattened out. The pregnancy should terminate, according to calculation, on the 28th of December (forty-five days hence). No vaginal examination was made for fear of causing disturbance; the patient was not flowing at the time of the visit, nor was she weak. The pulse was good, and so was the appetite. The head of the child was to be distinctly made out through the abdominal wall above the pubes, and the curve of the back was towards the left side of the abdomen. The fetal heart was heard near the umbilicus. The placental bruit was heard very distinctly on the left side at the level of the anterior superior spine of the ilium, and thence downwards towards the groin and close to Poupart's ligament, where it was loudest. The sound diminished towards the median line, within an inch of the line was not heard at all, and was again heard upon the right side of the abdomen, perhaps a little lower than on the left side, and not so distinctly, but still very marked. Perhaps, Dr. Buckingham remarked, the case may yet show something of interest in regard to the seat of the placenta.

DR. FIFIELD said that the placental souffle is not peculiar to pregnancy, as a similar sound is also heard with large fibroid tumors, and makes a point of distinction between these and ovarian sacs.

DR. BUCKINGHAM, speaking of the uncertainty of the fetal heart-sound, mentioned the case of a woman in the lying-in hospital, who was examined by two students in reference to this symptom. They differed, one asserting that

he heard the heart beating on the left side of the abdomen at the rate of 140, while the other could hear it only upon the right side, where it beat at the rate of 150. Dr. Buckingham, having been called to settle the question, failed to hear the heart in any locality. The next day the woman was delivered of twins.

THE AMERICAN SOCIAL SCIENCE ASSOCIATION.

THE meeting of the American Social Science Association held January 12th, in this city, was simply the annual meeting for the election of officers. But in accordance with the expansive policy favored by the energetic secretary, Mr. Frank B. Sanborn, the general public was invited to listen to the reading of a number of papers upon subjects of general interest, after the close of the business session.

One of the most interesting of these papers was that by Gamaliel Bradford, upon The Forty-Fourth Congress, explaining some objections to the present way of conducting its business, and proposing, as a remedy, that the Cabinet officers should have seats in the House, with the right to participate in debates on matters relating to the business of their departments.

Dr. E. C. Wines presented a communication upon the proposed International Prison Congress in Stockholm in 1877, and a very able report on Homes for Working People in Cities was presented by Mr. Sanborn.

The Health Department reported its own doings for the past year, and the department secretary, Dr. D. F. Lincoln, gave a paper upon School Hygiene, synoptical in its nature, and embodying recommendations relating to the following points:—

- (1.) Teachers and scholars to be obliged to practice gymnastics at school, except when excused for special reasons.
- (2.) Instruction in the rules of hygiene, rather than in the science of physiology.
- (3.) Regulations to prevent the spread of contagious disease in schools.
- (4.) Placing the supervision of schools under the charge of special sanitary officers.

The above measures were not discussed at length, but were offered rather in the form of suggestions. It is to be hoped that the public interest in this kind of reform will not flag, until the present evils of bad air, poor light, and (in many cases) improper arrangements for drainage and privies are remedied. The paper of Dr. Lincoln contained few facts which are not known to the instructed; but the trouble of the times is that the public—even the mass of intelligent medical men—is not instructed in reference to ordinary sanitary matters. A vast reform is to be effected, beginning, let us hope, with the more thorough education of physicians in sanitary science. It is certain that the interests of the commonwealth require it.

The officers of the association for the ensuing year are as follows:—

President, Hon. David A. Wells; Vice-Presidents, C. W. Eliot, Theo. C. Woolsey, D. C. Gilman, and nine others; Secretary, F. B. Sanborn; Treasurer, Gamaliel Bradford.

Of the Department of Health: Chairman, Dr. E. Wigglesworth; Secretary, Dr. D. F. Lincoln.

THE TRIAL OF HENRY WAINWRIGHT.

THE trial of Henry Wainwright for the murder of Harriet Lane has already been alluded to in our columns in connection with the examination of the uterus of the murdered woman. The intense interest which this trial excited throughout England accounts for the extended comments which the case has received at the hands of our English exchanges, from one of which, the *British Medical Journal*, we extract the following facts in the history of the murder: "Henry Wainwright, a married man with a wife and five children, had formed a secret connection with the deceased Harriet Lane, and had had by her two children. He paid for their support, but with difficulty, as he was in embarrassed circumstances. In the autumn of 1874 this led to quarrels between the prisoner and the deceased. He became indifferent to her, and she fell into great distress. She was moved by the prisoner from one lodging to another, passing under a false name as the wife of the prisoner, who had also assumed another name. By an arrangement with the prisoner she left her lodging on September 11, 1874. He had provided her with means to discharge all her debts, and she was then in good health and spirits. From that date she was never afterwards seen alive. Application was made to the prisoner by her friends for information respecting her, but his answers were not satisfactory. By his statements, and by the use of false letters and telegrams, he led the friends to believe that the woman had gone away with another man whom he named. This also was proved to be a falsehood, and the matter dropped, until September 11, 1875, exactly a year after the disappearance of the diseased.

"At this date the prisoner was found removing from a grave on premises in the Whitechapel Road, of which he had the key, the remains of a body, which proved to be the body of a woman, and was alleged to be that of the missing Harriet Lane. It was further alleged that when she left her lodging on September 11, 1874, she went in a cab to the premises in the Whitechapel Road where this body was found. She took leave of her friend and her children, and made a statement which, owing to the strict rules of evidence, was not admitted at the trial. It has now transpired that she went directly by an appointment with the prisoner to these premises, and was never again seen alive. Other facts led to the conclusion that the prisoner had met her there, murdered her, and buried her body in a grave dug beneath the floor of one of the rooms.

"In September, 1875, these premises were likely to pass into the hands of others. This would have led to a discovery of the remains, and it rendered their removal a necessity. It was in thus transferring them to another hiding-place in Southwark, belonging to his brother, that he was found in possession of parts of a mangled human body for which he could not reasonably account, and concerning which he made what was proved to be a false statement.

"The body had been recently cut up, and when taken possession of by the police, the pieces were packed in two parcels of American cloth, and corded. It was proved that, on September 10, 1875, the prisoner had employed his

brother to purchase for him a spade and a small chopper or ax. These articles were found on the premises, and had evidently been recently used. The chopper had upon it putrescent animal matter, and the spade clay mixed with lime. On the same day, Wainwright himself had purchased three yards of American cloth and a quantity of cord similar to that used in tying up the remains.

"The woman was found with two bullets in her brain, and a third in a hair pad at the back of the head. Besides that, there was a cut extending from the centre of the throat to the angle of the lower jaw, which had severed all the tissues, and which must have been inflicted with very considerable force."

The remains were discovered after many months, dried and partially decayed, with a certain amount of adipocere. The body had been buried with chloride of lime. As there has been much said and written of the means by which the body was identified, it may be interesting to our readers to know that there was no great mystery or science about this identification, if we may judge from the long account given in *The Lancet*. From a mass of evidence bearing upon eight points, namely, height, age, general shape, teeth, hair, feet and fingers, uterus, and scar, we learn that there was a peculiar scar and depression over the fibula, below the knee, which was readily recognized; that the hair was auburn, curled, tied with a piece of velvet, and having a peculiar pad, which was found and recognized. There was also a prominence of the two front teeth and a decayed tooth, all of which were identified. The rest of the evidence was simply not incompatible, or, at the most, generally corroborative. There was, of course, other evidence relating to clothing, etc., to which we do not allude because it is not medical.

There is one feature of peculiar interest in this tragedy which we commend to the notice of our legal friends, namely, the closing scene. The detailed accounts of the trial had scarcely time to follow to these shores the telegrams announcing the conviction of Wainwright, before the criminal had suffered the penalty of his crime. There was no such delay as has been granted to two criminals in recent trials in this neighborhood, in both of which cases an interval of twelve months is to elapse between the sentence and the execution. Henry Wainwright was hanged three weeks after receiving his sentence.

MEDICAL NOTES.

—In his annual summary of the mortality of Providence, R. I., Dr. E. M. Snow states that there were 1915 deaths in that city during the year 1875, or 72 less than in 1874.

The population of the city, by the state census of June 1, 1875, was 100,675. The number of deaths to population last year was therefore one in 52.57, or 19.02 in each 1000. The result is in the highest degree satisfactory, and places Providence in the front rank of cities in this country in respect to its rate of mortality. Of course it will not bear comparison with those cities where a report of mortality known to be largely deficient is compared with a population very greatly overestimated. In the city of Boston, in 1875,

there were 8953 deaths in a population of 342,000, or one death in 38.2, or 26.17 in each 1000. In that city the returns of deaths are supposed to be complete, and the population is not overestimated.

— We have received the fiftieth annual report of the Massachusetts Charitable Eye and Ear Infirmary. We believe the only change in the staff of this institution has been the appointment of Dr. G. Stedman as superintendent in place of Dr. A. N. Blodgett, resigned.

— Dr. J. N. La Barte died on January 9th at Erie, Pennsylvania, from dislocation of the neck occasioned by a fall. He was born at or near Drogheda, an ancient historic town on the east coast of Ireland, north of the city of Dublin. Of good family, his father was a gentleman of property, and gave to several of his sons the advantages of an education at the Royal University at Dublin. After taking his degree at Trinity College, the doctor pursued an exhaustive course in medicine and surgery, and for a time practiced his profession in his native land. Meantime he married the daughter of the commissary of customs of Dublin. Shortly after, he came to this country, and after a long struggle with poverty, his wife with the children returned to her friends in England, and not long after he entered the army, where he won an enviable distinction as surgeon. When the war was over he returned to his former home in this country and resumed the practice of medicine. Circumstances finally brought him to Erie, where in connection with the drug business of the Messrs. Nick and their successor, Mr. Smith, he has for some years found congenial work, coupled with a kind appreciation and sympathy. Meantime his children had come to him from abroad, and only four days before his death he attended the wedding of his eldest daughter, a young lady of more than ordinary force of character and accomplishment. He will be missed by a large circle of friends.

— We are somewhat amused at the manner in which our English exchanges are scandalized from time to time on the discovery that some American adventurer wearing the title of "doctor" has trespassed upon English domain. The latest of these gentlemen purports to come from Boston, and to be the agent of a medical reform association. We presume it must be the rarity of these occurrences which renders them more startling to our English cousins, and that they can hardly be aware of the extent to which the English diploma is claimed as a shield to all sorts of quackish practices in this country. Large incomes are made by men said to have been the pupils of well-known London physicians and to be armed with London diplomas. There is a notorious instance of this kind to be found in our own city, where the individual has preyed upon the pockets of many unfortunate people afflicted with cancer. We presume New York is a favorite hunting-ground for numerous adventurers of this class. Unfortunately, we are powerless to prevent these practices. We confess to being somewhat envious at the facility with which the practices of our would-be colleague were nipped in the bud.

— The *Louisville Medical News* is a new weekly journal established in Louisville. The editors are Drs. R. O. Cowling and William H. Galt. It is, of course, a rival to the *American Medical Weekly*, published in the same city, and appears to have been started in the interests of the University of Louis-

vill. The two numbers which have appeared contain pungent editorials on medical education. — The seventh annual report of the Children's Hospital reminds its friends of the continued existence and vigor of an exceedingly useful charity. At the opening of the last year a department for out-patients was established, and during the summer a convalescent home was kept open for the use of the patients; this home is in Wellesley, about fourteen miles from the city; thirty-nine children received here the benefit of the country air. This seems to us a very valuable addition to the resources of the hospital. The managers make an earnest appeal for funds to continue this charity upon its present footing. It well deserves the support of the community. — Dr. H. Lenox Hodge's Note-Book for Cases of Ovarian Tumors and other Abdominal Enlargements has been received from Messrs. Lindsay and Blakiston. It is modeled on a note-book prepared by Spencer Wells, and modified by suggestions made by Drs. Atlee and Peaslee. It is simple in its arrangement, has several useful diagrams, and admits of full and systematic note-taking.

— The Transactions of the Michigan State Medical Society for the year 1875 has recently appeared. We notice in the business of the annual meeting a resolution condemning the action of the state university in admitting homœopathic professors and students to the university; the resolution was offered by Dr. Topping, but was laid upon the table without discussion. Another resolution was offered requesting the regents of the university to make, as soon as practicable, a full three years' course of graded study in the medical department. Dr. Dunster, in response to the resolution, stated that a preliminary examination was already one of the features of the present course, and that the day was not far distant when a course similar to that adopted by Harvard would be inaugurated. The resolution was adopted. A committee appointed by the society to obtain by act of the legislature a law to secure a better medical culture of the average physician, reported that they had conferred, according to instructions, with several homœopaths and eclectics, and had framed a bill which had failed to pass the legislature. The object of this bill was practically to oblige every practitioner in the State to pass an examination, held by a state board, on all medical topics except those on which the so-called schools of medicine differ. Several papers of considerable merit are included in the report of the society.

— In a clinical lecture on the physical examination of the urethra in cases of stricture, published in *The Lancet* of December 11, 1875, Sir Henry Thompson protests against the severe operative treatment in cases of slight stricture which is resorted to by many practitioners at the present time. He finds, he says, a tendency at the present day to employ instruments too readily, and instruments also which are liable to injure the urethra. This over-readiness to interfere with the urethra existed at the beginning of the present century, when the practice of applying dilatation, cutting, or caustic to the urethra was in the ascendant. Following this period came the experience of mischief as its result, and a healthy reaction appears to have taken place. The practice of Sir Benjamin Brodie, a high authority, was marked by caution and prudence, and his admirable teaching insured a similar practice among others for some

time. But of late there has been a growing disposition to return to the state of things of the earlier period. There is an increased tendency to discover stricture, and especially to undertake a considerable amount of operative treatment for strictures of the slightest kind, and sometimes where, in the opinion of the lecturer, they do not exist. There seems now to be a school which has determined for itself a very high standard of potency in what we hear called the "urethral tube," and which is accordingly said to have, or, if it has not, that it ought to have, a calibre of so many parts, and very large parts, of an inch, or millimetres. Instruments of astounding magnitude are produced, and if one of them cannot be drawn, with an ease which contents the operator, through the whole of the urethra, the unlucky patient is pronounced to be the subject of stricture, and probably he is subjected to an operation by no means devoid of risk. The urethra in its normal state is not a passage of uniform diameter throughout, and its natural capability for dilatation varies greatly at different points. Its structures are extremely delicate, and it has a strong tendency to arouse in the entire nervous system a state of excitement, evidenced by the striking phenomena of rigors and subsequent fever and prostration, when slight mechanical injury has been done to any portion of it. When, therefore, we are consulted by a patient for certain troubles for which it is important to know whether urethral obstruction be a cause or not, we should not adopt the unnecessary course of introducing very large instruments, but should take a flexible bougie, well curved toward the point, with a blunt end, not larger as a rule than No. 10 or 11 of the English scale, and pass it very gently and slowly into the bladder. If it goes easily, above all if it is withdrawn without being held, and slides out with perfect facility, the patient has no stricture, and, as far as obstruction is concerned, needs no use of instruments.

CHARITY HOSPITAL AT BERLIN.

MEDICAL CLINIC.

BY T. M. ROTCH, M. D.

Two Cases of Anæmia Perniciosa. — CASE I. November 14, 1875, the patient, a man fifty years of age, entered the hospital; he knew nothing of his family history excepting that his parents died of typhoid fever. Previously to his present illness he had felt strong and had been able to do a hard day's work, that of a street-laborer. He had had comfortable lodgings and good food. According to his own statement, he contracted a chancre in 1860, but this was followed by no observable symptoms. In 1870 he had an attack of pneumonia of the left lung, from which he recovered completely, but has since then had an ulcer of the left leg, which has lasted up to the present time, without, however, particularly inconveniencing him. For the last three or four months he has noticed a decided failure in his strength, with loss of appetite; at the time of his entrance, he complained of pain extending from the back part of the head on the left side around to and across the forehead; pain also in the left eye. He had no appetite; his bowels were rather constipated.

He was a man of fair muscular development, but there was great pallor of the lips, small points of hæmorrhage appeared in the skin of the chest and in that of the back of the left hand, and there was the same appearance in the mucous membrane of the gums.

On physical examination nothing abnormal was found in the heart or lungs; there was no enlargement of the spleen or glands; nothing abnormal was detected in the abdomen; small points of hæmorrhage were observed on the retina of left eye. Temperature 38° Celsius; it has been a little higher. Pulse weak, not increased in frequency, urine normal; specific gravity 1016. The blood, microscopically examined, showed a high grade of anæmia. Professor Traube diagnosed anæmia perniciosa, whose aetiology was septic poisoning originating from the *ulcus cruris*. The prognosis was very unfavorable. The treatment consisted of iron with stimulants, etc.

December 4th. The patient gradually grew weaker, and died this morning.

Autopsy by Professor Virchow. Heart almost normal, showing only a very slight fatty degeneration of the papillary muscles and a few hæmorrhagic points in the endocardium. There was sclerosis (beginning atheroma) of the aorta. Hæmorrhagic points appeared in the pleura and diaphragm. The lungs, spleen, liver, stomach, and right kidney were normal; the left kidney was normal excepting in one pyramid, which showed diphtheritic changes. There was very extensive diphtheritis of the ileum and large intestine. Hæmorrhages were found in the dura mater and pia mater, and in the periphery of the cerebellum, on the left side, in the gray substance; some hæmorrhagic points were also observed in the neighboring white substance, which showed yellow œdema. The other parts of the brain were normal. The blood microscopically showed great hydræmia.

Professor Virchow made the anatomical diagnosis of anæmia perniciosa and diphtheritis of the intestine and kidney. He said in regard to the aetiology, "The disease probably has nothing to do with the *ulcus cruris*; nothing as yet has been proved in regard to its origin; I am inclined to believe that it is malarial."

The interesting points of this case were, first, that the heart was not decidedly fatty, which is usually the case in anæmia perniciosa; second, the existence of an extensive diphtheritis of the intestine, with no symptoms of the same during life. So that pathologically it was not a pure case of what is usually recognized as anæmia perniciosa, although clinically it presented the symptoms of that disease.

CASE II. December 5, 1875. The patient was a man about forty years of age, previously healthy, but a great drinker. About three weeks ago, feeling ill and being constipated, the patient applied to a doctor for advice, and a cathartic was ordered, the nature of which is not known. The doctor did not return to observe the result of his treatment, and the patient, according to his own statement, continued to use the cathartic every day, which caused such an excessive irritation of the intestine that a profuse diarrhœa was the consequence, and the patient entered the hospital in a state of extreme prostration, and in fact moribund. Inspection showed extreme pallor of the lips, with hæmorrhages in the mucous membrane of the gums. The urine was normal.

An *ulcus cruris* was on the right leg. The clinical diagnosis by Professor Traube was *anæmia perniciosa* following and caused by a profuse and long continued diarrhœa.

The patient died in a few hours after entering the hospital.

Autopsy. Old fatty heart, with dilatation of right ventricle; extreme hyperæmia of the whole length of both small and large intestine; great hydræmia of the blood; nothing further discovered which was abnormal.

Professor Traube speaks of a case of *anæmia perniciosa* coming under his notice which appeared to have been caused by an interstitial nephritis. A case of this disease has lately been treated in Leipzig by transfusion of blood, but with no good results, the patient appearing to derive not the slightest benefit from it.

I regret very much that the history of the second case is so incomplete, but the patient died almost immediately after entering the hospital, and but very little was learned concerning him. The disease appears to be comparatively rare here in Germany, and the medical men to be rather in the dark concerning its origin and cause, Traube and Virchow having the most opposite views on the subject. The literature of the disease also, so far as I have been able to ascertain, is very unsatisfactory, although a pernicious form of *anæmia* has been spoken of during the last sixty years. Professor Immermann has written some short articles on its clinical history, and Ponfick has described its pathological anatomy.

LETTER FROM NEW YORK.

MESSRS. EDITORS, — The problem of how *not* to manage a hospital is being rapidly worked out by that unfortunate body known as the board of trustees of the Presbyterian Hospital. They seem to have lost all sense of common justice and to flatter themselves that, because the board is composed of clergymen and retired merchants who have grown old in the offices of Wall Street or the counting-rooms of South Street, they are perfectly competent to manage a hospital. At the date of my last letter on this subject, the board of trustees had just appointed a committee of five to confer with those members of the medical staff who had sent in their resignation, to see if some plan could be devised to satisfy both parties and reconcile the opposing views. After several conferences the committee agreed to report two plans, either of which would satisfy the four gentlemen; and at a meeting of the board of direction, held November 16th, they presented their report with the following recommendations: either that the four recently appointed members of the medical staff be informed of the embarrassment the trustees found themselves in, and be asked to resign, in order that those who were dropped at the annual election might be reappointed; or that the medical staff, which originally consisted of twelve, be increased to sixteen, and that the board reappoint the four who were dismissed, with the distinct understanding that, in case of any vacancy occurring, no new appointments should be made until the number of the attending staff be reduced to below twelve. Immediately after the report was read, a clerical member of the board arose and moved that the report be not accepted, and

proceeded to administer a rebuke to the committee because they had transcended their power, and had entered into a league with the doctors in a crusade against "a most worthy woman and a deserving charity." As the mention of the name of the "lady directoress," or even an allusion to her, had been kept out of the controversy, it seems rather strange that it should have been introduced by one of her friends. It is reported that some very plain remarks were made by the chairman of the committee to the reverend gentlemen, after which he took his hat and left the meeting, remarking that when he became a member of the board he had expected to meet gentlemen, but he had found that he was mistaken, and he informed the board that his resignation was in their hands. The other members of the committee present also resigned and left. Since then quite a number of members of the board have resigned, including many of those who were most useful. The resignations of the four physicians were then accepted. On the above facts being known, quite a number of the profession, on talking over the matter, thought that in justice to those gentlemen of the board of direction who had stood by the profession, and in order to bring more clearly before the public the feelings of physicians in regard to the relations existing between those connected with hospitals and the governing boards of such institutions, some general action should be taken. They therefore called a mass meeting of the profession of the city, which met at the Union League Club on the 30th of November, every physician in the city being invited. Between four and five hundred were present. Dr. T. M. Markoe was chosen president, and among the vice-presidents were Drs. John C. Dalton, James R. Wood, T. G. Thomas, H. B. Sands, and T. Addis Emmet. In his introductory remarks, Dr. Markoe stated that they had come together for the purpose of considering the relations between physicians and the outside world. It was for the defense of a certain principle that they had assembled, and they should not let personal grievances influence them. Dr. George A. Peters then read a statement of the facts in the case, while a committee consisting of Drs. Agnew, St. John Roosa, and Delafield was framing a set of resolutions of which the following is an abstract: That the medical profession in New York could not look with indifference upon such proceedings as those which have been witnessed with reference to the Presbyterian Hospital; that they believed that the four gentlemen dropped from the medical staff had not been treated with common justice; that no medical man should place himself in a position from which he may be dismissed without charges preferred or a hearing allowed; that the action of those members of the staff who resigned was approved; and that it was the sense of the meeting that similar occasions of disagreement between boards of directors of hospitals and their medical staff, as well as grave faults in the management or in the construction of hospitals, could be avoided only by an adequate representation of the medical profession in the membership of the boards of direction. These resolutions were unanimously carried. Remarks were made by Drs. Thomas, Agnew, Thompson, and others. Dr. James R. Wood moved that this meeting become a permanent organization, and that when it adjourns it be subject to the call of the officers. This was also unanimously carried.

The tone of the meeting throughout was dignified, and it cannot be considered

otherwise than a perfect success. From the resolutions there can be no doubt as to the feeling of the profession in regard to the recent action of the board of trustees of the Presbyterian Hospital, and the relations at present existing between the two boards connected with most of our hospitals. It is useless to disguise the fact that, with a few exceptions, there is a great want of harmony between directors and physicians, and that common justice demands that those who do the work and give reputation to hospitals should have something to say about their construction and management.

An official statement appeared in the *Medical Record* of January 1st that the Presbyterian Hospital contained forty-five patients, that the board of managers had been under the necessity of opening two more wards (how many wards did they use before?), and that there were *eleven* candidates for the vacancies on the medical staff. This looks very well in print. On the 16th of November the resignations of four members of the staff were accepted; it seems very strange that these vacancies have not been filled, although there have been several meetings of the trustees. It is reported upon the best of authority that the managers of the hospital made a proposition to Bellevue Medical College, offering to place the institution under their control if they would supply the attending staff; but after due consideration the latter declined to have anything to do with it. Every few days we hear of some one who has been asked to accept a position as an attending physician to this unfortunate hospital. It is useless for the board of direction to disguise the fact that they find it almost impossible to obtain gentlemen fitted for the position who are willing to take the office under the present board, and thus place themselves in a false position.

The plan of management adopted at the Roosevelt Hospital is one that may well be copied by other institutions. The board of trustees is small, and the medical profession is represented on it, and from the beginning the views of physicians in respect to its construction and organization have been sought and followed. The hospital has the reputation of being the best constructed and best managed institution in the city.

There is now in the process of construction a hospital situated on West Fifteenth Street, which may be called a "trustee" hospital. The building is five stories high; its foundation on the east side is placed on rock, while on the west are quicksands and springs; it is placed directly on the street, and occupies the whole front of the lot; it is closed in on the east and west sides by houses, while on the north and rear is situated a house which partially shuts it in on that side; the sun is excluded from all sides, except on the south. It is true that no expense is being spared in its construction, and it remains to be seen whether brick, mortar, and machinery are all that is required to constitute a hospital on what are now considered sound principles, and whether location is an element worth considering.

Since writing the above the following gentlemen have been appointed on the staff of the Presbyterian Hospital: Drs. William Detmold, Jared Linsley, Charles K. Briddon, and L. A. Stimson. We have nothing to say on the subject, except that if these gentlemen are willing to place themselves in a position where they may be dismissed at the dictation of a subordinate officer, it is their

own matter, and if they are summarily "dropped" they will not receive much sympathy from the profession. One of these gentlemen was one of the vice-presidents of the mass meeting.

Dr. T. Addis Emmet has been appointed consulting physician to the Roosevelt Hospital, in the place of Dr. Alonzo Clark, who resigned on account of his being president of the College of Physicians and Surgeons, and so a member of the board of trustees of the Roosevelt Hospital.

NEW YORK, January 17, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JAN. 15, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	508	25
Philadelphia	800,000	346	25
Brooklyn	500,000	256	26
Boston	342,000	171	26
Providence	100,700	25	13
Worcester	50,000	20	21
Lowell	50,000	20	21
Cambridge	48,000	20	22
Fall River	45,000	18	21
Lawrence	35,000	8	12
Lynn	33,000		
Springfield	31,000	8	13
Salem	26,000	6	12

Normal Death-Rate, 17 per 1000.

SEFFOLK DISTRICT MEDICAL SOCIETY. — The regular meeting will be held at 36 Temple Place, on Saturday next, at 7.30 P. M. Papers will be read by Dr. A. F. Pattee, on The Therapeutic Properties of Zinc Phosphide; by Dr. G. H. Bixby, on a Remarkable Specimen of Uterine Fibro-Cyst; and by Dr. W. W. Morland, on a Difficult Case of Labor. Members of other district and state societies are cordially invited.

BOOKS AND PAMPHLETS RECEIVED. — The Nature of Light. With a General Account of Physical Optics. By Dr. Eugene Lommel, Professor of Physics in the University of Erlangen. New York: D. Appleton & Co. 1876. International Scientific Series. (For sale by A. Williams & Co.)

The Medical Jurisprudence of Insanity. By J. H. Balfour Browne, Esq. Second Edition. Philadelphia: Lindsay and Blakiston. 1876. (For sale by A. Williams & Co.)

Principles of Human Physiology. By William B. Carpenter, M. D. Edited by Henry Power, M. B. Lond. Eighth Edition. Philadelphia: Lindsay and Blakiston. 1876. (For sale by A. Williams & Co.)

Air and its Relations to Life. By Walter Noel Hartley, F. C. S. New York: D. Appleton & Co. 1875. (For sale by A. Williams & Co.)

Transactions of the Pathological Society of Philadelphia. Vol. V. Edited by James Tyson, M. D. Philadelphia: Printed for the Society by J. B. Lippincott & Co. 1876. (For sale by A. Williams & Co.)



DAYS OF
MONTH.
DAYS OF
DISEASE.

October

10	11	12	13	14	15	16	17	18	19	20	21	22	23
5	6	7	8	9	10	11	12	13	14	15	16	17	18

TEMPERATURE (FAHRENHEIT'S SCALE.)

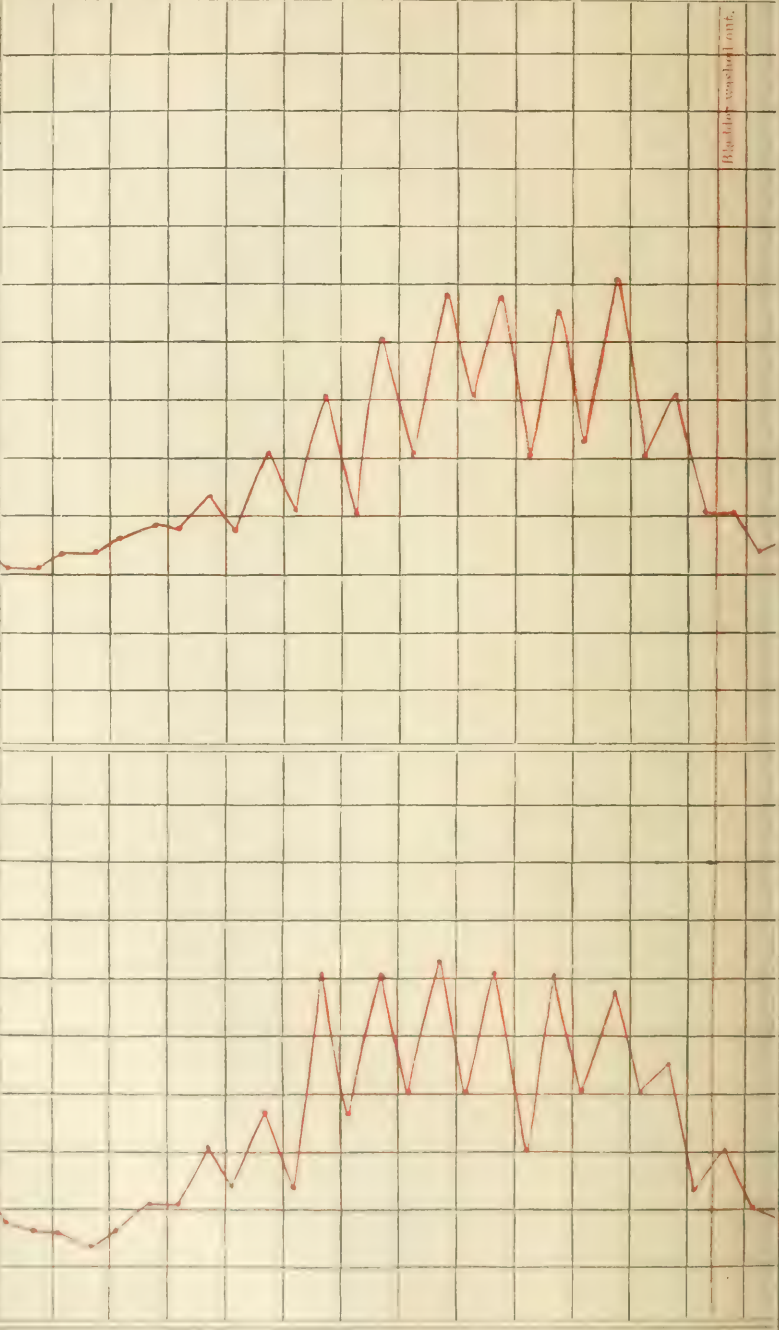
107°
106°
105°
104°
103°
102°
101°
100°
99°
98°
97°
96°
95°

PULSE-BEATS PER MINUTE.

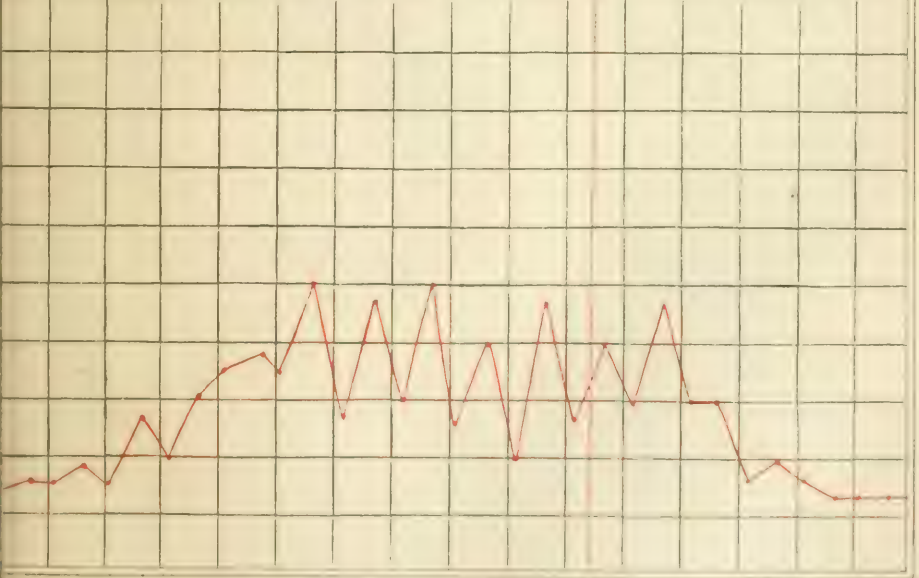
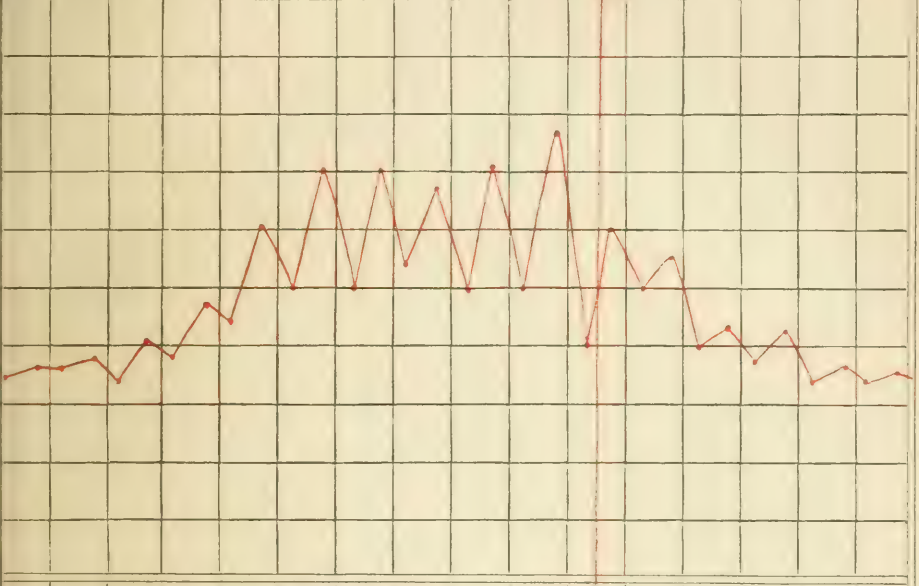
150
140
130
120
110
100
90
80
70
60

M E M E M E M E M E M E M E M E M E M E M E M

Right test washed out.



November															
24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34

[illegible][illegible]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XCIV. — THURSDAY, FEBRUARY 3, 1876. — NO. 5.

SUBACUTE CYSTITIS FOLLOWING PARTURITION.¹

BY W. L. RICHARDSON, M. D.,

Visiting Physician of the Boston Lying-In Hospital.

No mention is made, in any of the works on obstetrics which I have been able to consult, of any inflammatory condition of the bladder following delivery. Holmes in his *System of Surgery* places among the causes of acute cystitis a protracted or difficult labor, but the disease as he describes it is a very severe affection, which runs a rapid and often fatal course, and which is always accompanied by a marked constitutional disturbance.

During the past three years I have met with four instances of a marked inflammatory condition of the bladder following delivery. It is possible that many of the cases of metritis or circumscribed peritonitis which have been reported by physicians may have been a similar temporary affection of the bladder, and it is with the view of calling the attention of the profession to this variety of cystitis that I venture to report the following cases.

CASE I. (with clinical chart). F. H., married, primipara, twenty-three years old, was taken in labor October 5, 1873, about six o'clock in the morning. The os slowly dilated, and the first stage was completed at 2.30 P. M. The pains, which had been regular and of considerable intensity during the day, now began to occur at longer intervals, and, as but little progress if any was made during the next three hours, forceps were applied, and the patient was delivered at 6.30 of a male child which weighed eight and a quarter pounds. During the first seven days which followed the delivery nothing abnormal was noticed; but in the evening of the eighth day the patient had a marked chill, followed during the next seven days by a very high evening temperature and pulse (the former being in the neighborhood of 102°, and the latter 120), while the morning examination showed a temperature and a pulse of only about 100. The morning after the chill, the patient complained of great pain and scalding on micturition, and there was very marked tenderness over the pubes. There was more or less nausea, and two attacks of vomiting occurred during the day. The

¹ Read before the Obstetrical Society of Boston, December 11, 1875.

history of the milk and lochia was normal throughout the progress of the case. The bowels were moved on the third day, by a dose of castor-oil, and subsequently the patient had, as a rule, one daily defecation. The dysuria was relieved temporarily by the occasional use of suppositories containing an eighth of a grain of the sulphate of morphia. Poultices of linseed meal and mustard were applied over the bladder. The tenderness over the pubic region still remaining, and the dysuria also being frequently complained of, an examination of the urine was made, and a considerable quantity of pus was found in it, together with a slight amount of blood. The bladder was accordingly washed out (October 20th) by means of a double silver catheter, with warm water, and afterwards with a weak solution of carbolic acid (six drops to the pint of water). The temperature and pulse at once fell, and the patient expressed herself as feeling decidedly better. The dysuria was greatly relieved. During the next five days the patient slowly improved, and the tenderness over the pubic region was very much less than before.

On the morning of October 27th, however, she had a second chill. The temperature and pulse began again to show a high evening and a low morning range. The dysuria returned, although it was not so severe as before. The tenderness over the bladder was again noticeable. The urine was found (November 3d) to be very offensive, and to contain a large amount of pus. The bladder was again washed out, and the immediate relief from all the symptoms just described was even more marked than on the first occasion. The temperature and pulse at once fell, the dysuria disappeared, and in three days no tenderness over the bladder could be detected. The patient made a rapid recovery, and went out to ride November 12th.

She was again confined May 3, 1875, but no deviation from a normal delivery or convalescence was noted.

CASE II. M. L., married, primipara, nineteen years old, entered the Boston Lying-In Hospital November 5, 1875, to await her confinement. Labor began early in the night of November 16th, although she had suffered considerably during the previous twenty-four hours from false pains. The os dilated rapidly, and the first stage of labor was completed about six o'clock. The pains now began to come on at longer intervals, and were less severe in character than before. The head, having reached the perinæum, made but little if any progress until eight o'clock in the morning, when, the os being fully dilated and the head low down in the perinæum, the membranes were ruptured. The pains at once became stronger in character, and a male child of seven and a half pounds was born at 9.45. In the evening, the patient being unable to pass her water, it was drawn by a catheter.

November 17th. The report was that the patient had slept well and was feeling nicely, although somewhat restless.

November 18th. The water was again drawn by the catheter. The milk and lochia were normal, and continued so during the subsequent history of the case. The pulse and temperature were somewhat elevated, as is usually observed during the accession of the milk. The temperature was about 101° and the pulse 120.

November 19th. At the morning visit the patient expressed herself as feeling very well. The temperature and pulse had both fallen to 98° . In the afternoon, however, she complained of great distress in the abdomen, which was not relieved by the application of poultices. One eighth of a grain of the sulphate of morphia was ordered, and the patient was soon quiet. An enema was given at the evening visit, as no defecation had been had since the confinement; the effect of the injection was slight.

November 20th. The skin was hot and dry, the abdomen somewhat tender over the region of the bladder. Half an ounce of castor-oil was ordered, and a good operation was obtained from the bowels. The temperature was 100.6° , the pulse 120. Poultices of linseed meal and mustard were applied to the abdomen. In the evening the temperature had risen to 103.6° .

November 21st. The patient remained about the same, the temperature in the morning being 99° , and at night 104.2° .

November 22d. The tenderness of the abdomen had nearly disappeared. The patient reported herself as feeling well. The temperature in the morning was 101° , at night 103° .

During the next four days the patient's condition remained about the same. She did not complain of any abdominal pain or tenderness. The temperature in the morning averaged about 98° , and at night 102° , or 103° , with a corresponding variation in the pulse. She reported herself as feeling well, and complained only of loss of appetite.

November 27th. She had a chill in the afternoon, and the next morning was unable to pass her water, which was therefore drawn by a catheter.

During the next three days no change was noticed, the temperature being, as before, normal in the morning, but quite high at night. Some tenderness on pressure over the bladder was present.

November 30th. The patient had a second chill.

December 1st. Two chills occurred. There were also two attacks of vomiting. The general condition of the patient was one of considerable nervousness, for which bromide of potassium was ordered. She now began to complain of great pain and scalding on urinating. Suppositories containing an eighth of a grain of the sulphate of morphia were ordered, *pro re natâ*.

December 2d. The patient had another attack of vomiting and complained of some abdominal pain. No tenderness, however, could be detected anywhere.

December 3d. There was decidedly less pain on micturition. The temperature, as before, still remained low in the morning and high in the evening. An examination of the urine, drawn by catheter, showed the presence of considerable pus.

December 4th. The bladder was washed out with a weak solution of carbolic acid (three drops to the pint), as in the previous case. The next day, December 5th, the patient reported herself as feeling very much better. There was no dysuria. The evening temperature fell to 99.8°.

December 6th. An examination of the urine showed decided diminution in the amount of pus. The bladder was again washed out. From that time the temperature, morning and evening, remained nearly constant at a little over 98°.

December 10th. The patient sat up.

December 11th. She was about the ward, feeling as well as ever.

She was discharged from the hospital, well, December 16th.

CASE III. F. S., single, primipara, twenty-one years old, entered the Boston Lying-In Hospital April 16, 1874, to await her confinement. Labor began about eleven o'clock of the night of April 28th. The waters broke at five o'clock of the morning of the 29th, and the os was fully dilated at eleven o'clock. The pains having become very weak, and the labor making no further progress, forceps were applied, and the child (a female weighing six and a half pounds) was born about half past twelve. The first five days following the delivery, the urine was drawn by a catheter, the patient being unable to pass it herself.

At the evening visit of May 4th, the patient complained of some pain over the region of the bladder, and the next morning there was marked dysuria.

May 5th. The pain over the bladder had considerably increased, and the catheter had to be used. A poultice of linseed meal and mustard was applied over the pubic region.

℞. Potassæ bicarbonatis	3 ij.
Tincturæ hyoseyami	ʒj.
Mucilaginis acaciæ	ʒ v. M.

S. Half an ounce every three hours.

The scalding and pain on micturition gradually diminished, and the medicine was discontinued May 8th. The tenderness over the bladder was noticeable for a day or two longer.

May 11th. The patient sat up a short time, and the next day complained again of dysuria, and pain over the pubes. The recipe of the 5th was resumed, and a poultice reapplied.

May 14th. The pain and tenderness over the bladder had increased considerably, the former keeping the woman awake at night. There was some dysuria. The prescription of the 5th was omitted, and one eighth of a grain of the sulphate of morphia was ordered, *pro re natâ*.

May 15th. The patient reported herself as feeling much better. The abdominal pain and tenderness were decidedly less. The evening temperature and pulse were from the outset higher than the morning. The dysuria still continuing, the urine was examined May 21st, and found to contain a large amount of pus.

May 25th. The bladder was washed out with a weak solution of carbolic acid (six drops to the pint), and a drachm of the fluid extract of *pareira brava* was ordered three times a day.

May 27th. The tenderness over the bladder was decidedly less, although the patient still complained of great pain after passing water.

The dysuria gradually diminished, and June 6th the patient declared herself entirely free from it. An examination of the urine showed an entire absence of pus.

June 9th. The patient was discharged from the hospital, well.

The history of the lochia was normal throughout the course of the case. The variation between the record of the pulse and temperature, as taken in the evening, when compared with that observed in the morning was not nearly so noticeable as in Cases I. and II.; but the variation was constant throughout the course of the case. No chill was observed, nor was the tenderness over the pubes so great as in the two previous cases. The dysuria however was, if anything, more marked, and less readily yielded to treatment. There was no loss of appetite, and but little if any constitutional disturbance.

CASE IV. M. O., married, primipara, thirty-seven years old, entered the Boston Lying-In Hospital October 4th, during the service of Dr. Tuck, who has kindly allowed me to report the case. Labor had begun, but the pains were very weak, and occurred at long intervals. The waters broke very early in the morning of October 6th, the os at that time scarcely admitting the tip of the finger. During the next three days the pains were very weak, and occurred, as before, at long intervals, the os being very firm and rigid. Dilatation was very gradual.

October 9th. Morphine was ordered, and the patient obtained some sleep. The water was frequently drawn by a catheter, the patient being unable to pass it herself. The urine on the 9th was reported as dark-colored and offensive. At seven o'clock in the evening the child (a female weighing seven and a quarter pounds), was born, dead. The placenta came away at once, and the uterus contracted well, but soon an alarming post-partum hemorrhage took place, which was presently controlled by ice, ergot, brandy, and opium.

The next morning the patient was very comfortable. During the next three days the history of the case was that which usually follows natural labor.

October 17th. One week after her delivery, the patient complained of pain in micturition. The urine was very offensive and contained a large amount of pus.

October 18th. The bladder was washed out with a solution of carbolic acid (three drops to the pint), and the next day the patient reported decidedly less pain on passing water.

October 20th. The bladder was again washed out. No further dysuria.

October 22d. The patient sat up for an hour. Her subsequent history was one of rapid convalescence, and she was discharged from the hospital, October 31st, well.

Prior to the first washing out of the bladder the pulse had remained over a hundred, but at once fell to about 80. The temperature, also, which had been high at night and low in the morning, although the variation was not so marked as in the other cases reported, fell to 98°, at which point it remained constant.

Remarks. — All these cases present certain points in common. In all, more or less protracted pressure was exerted, during the progress of the labor, by the child's head upon the bladder. In two of the cases forceps were used to hasten the delivery. In the two cases (I. and II.) in which the cystitis was best marked from the outset, the invasion of the disease was announced by a chill. In the first case, where there was a relapse of the disease, a second chill preceded the rise in the temperature and pulse. In all the cases there was great dysuria, which in most of them was the chief symptom complained of by the patient, apart from the general constitutional disturbance. In three of the cases (I., II., and III.) there was marked tenderness over the region of the bladder, and the patients complained of more or less pain referred to the same spot. In one case (III.), the pain was so great as to render the use of morphia necessary, in order that the patient might obtain any rest or sleep. In the severer cases (I. and II.) more or less nausea and vomiting were noticed during the progress of the disease. The clinical history of the lochia and milk was normal from first to last. In all the cases the urine contained a large amount of mucus and more or less pus. In only one case (I.) was blood found in the urine on a microscopical examination. In none of the cases was the constitutional disturbance as great as would naturally have been expected from the daily variation in the record of the temperature, pulse, and respiration. At the evening visits the patients complained of feeling feverish and sick, but in the mornings declared themselves almost well, except for the dysuria or the local pain and tenderness on pressure over the pubic region. The record of the pulse, temperature, and respiration was, in all these cases, very peculiar, being characterized by a low morning and a high evening range, and this peculiarity was especially marked in the first two cases. In the last two the same variation was noticed, but the differences recorded were not nearly so great as in the others. A clinical chart of the first case is published; it illustrates very well the daily variations observed.

The only treatment adopted was the application of poultices over the region of the bladder, until the pain and tenderness had in a great measure subsided; the administration of morphia, either in suppositories or by the mouth, for the relief of the pain or dysuria; and finally, after the more acute symptoms had subsided, the bladder was washed out with warm water, and later with a weak solution of carbolic acid and water. In all the cases the washing out of the bladder was followed by a relief, and by a sudden disappearance of all the symptoms complained of, that was very striking.

REVACCINATION DURING THE PRESENT EPIDEMIC OF SMALL-POX IN CINCINNATI.¹

BY WILLIAM B. DAVIS, M. D.,

Professor of Materia Medica and Therapeutics in Miami Medical College, Cincinnati.

THE presence of variola in our city has caused much apprehension to our citizens, and led many, particularly those who have been exposed to it, to seek the protection which vaccination and revaccination give. In common with other physicians I have been called upon to revaccinate a number of persons. My past experience had not caused me to expect any marked result where the operation had been well performed once; hence I executed it more as a precautionary measure to those who had been exposed, knowing that a small fraction of mankind may take variola twice, and believing that this susceptible class may take the vaccine disease more than once. During my experience as a practitioner of medicine in this city, extending over twenty years, I have frequently been called upon to revaccinate, particularly whenever variola was prevailing, and yet I do not now recall a single instance wherein it was successful, or where it produced any degree of inflammation which attracted the attention of the party. It is true that I never made it a point to follow up the cases and see for myself the result. Yet I think it is reasonably certain that if severe inflammatory symptoms had occurred, my attention would have been called to them, for the majority of these persons were my regular patrons.

In the early part of November last I revaccinated a family of seven persons, including domestics. I was not a little surprised when summoned on the eighth day thereafter to see the lady of the house, who was said to be suffering very much with her arm, the one vaccinated. The lady is eighteen years of age, of a nervous temperament, and has one foveated cicatrix, about one fourth of an inch in diameter, resulting from her primary vaccination in infancy. I found her with a flushed face, accelerated pulse, complaining of chilliness, followed by fever and

¹ Read before the Cincinnati Medical Society, December 14, 1875.

headache. An examination of her arm revealed, at the point of insertion of the virus (I had scarified a surface at the insertion of the deltoid of the left arm, about one third of an inch in diameter, and plastered the virus over it), a vesicular eruption, confluent in character, the outer rim elevated and of a pearly hue, with a depression in the centre. It was just such a result as usually follows a primary vaccination by scarification at the end of the eighth day, when the areola is forming. Her arm differed from a primary vaccination in this, that there was a higher grade of inflammation than I had ever seen, involving and encircling the whole arm. On the ninth day the glands of the axilla were enlarged and painful, and the inflammation extended one third down the fore-arm. On the tenth day her fore-arm was swollen to the wrist, but her arm was subsiding; from this day the swelling rapidly declined, and on the fifteenth day there was a well-formed crust, which adhered until the twentieth or twenty-first day. One other member of this household, a servant, a strong, robust woman of twenty-five, had just such an arm as her mistress. Two others, aged sixteen and eighteen, healthy girls, had well-marked vesicular eruptions at the point of vaccination, and inflammation encircling the arm on the seventh day, but it rapidly declined from that date. In the remaining three there was no result.

About this time I was called to see two cases of varioloid, and one patient was brought to my office, on whose person the eruption of variola appeared twelve hours afterwards; hence I concluded it would be prudent to revaccinate myself and the members of my household, seven in all. I will state just here that it has been my custom every year, when exposed to variola, to insert some reliable vaccine matter into my arm. I have probably done it not less than ten times during the past twenty years, and the result has been absolutely nothing save the very slight irritation resulting from scarification, which subsided usually within three days. I revaccinated myself and family on November 23d. In four members there was no result; in the fifth, a boy of fourteen years, on the fifth day all of the appearances indicated that it would be successful; there was a vesicular eruption, and inflammation rapidly developed around the point of insertion, and extended around the whole arm by the sixth day, and then rapidly subsided before the tenth day. It presented the appearance of a "modified vaccination," if I may be allowed to use the expression. We know that as a rule, where an individual takes variola after vaccination, the disease is "modified," so modified that there may be no secondary fever and indeed there may be no eruption, or but one or two imperfect vesicles.

I know that some eminent medical gentlemen have pronounced such vaccinations "spurious vaccinations," or "not vaccine processes." I think these gentlemen have mis-read Seaton, who says, on page 113 of his *Handbook on Vaccination*, revaccination fails "to produce any

local effect whatever, or produces a modified effect, *resembling* one of the forms of spurious vaccination." I do not think a careful reading will lead any one to the conclusion that he regarded these modified vaccinations as having "no specific vaccine process." On the contrary, on page 311 of his Handbook, he distinctly recognizes them as possessing the regular phenomena of vaccination. Under the head of Degree of Success of Revaccination, his classification is "perfect," "modified," "none."

During the present epidemic I have seen very many such revaccinations. They undoubtedly followed some law, for they were uniform in their development, appearance, and subsidence: on the fifth day they showed all the indications of a successful normal vaccination; a vesicular manifestation matured, or rather arrived at the stage of its fullest development, on the sixth or seventh day; then a rapid areolar growth, extending in an irregular manner, until it involved and encircled the arm; and a complete subsidence by the tenth or eleventh day. If this be "spurious vaccination," then is varioloid spurious variola.

But to return to my story. My wife had been successfully vaccinated in infancy, and has a good mark resulting from it. We (myself and wife) felt our arms getting sore on the fifth day. A patch of vesicles appeared at the point of insertion of the virus, and gradually increased until the eighth day, when by coalescing they presented a confluent appearance, covering a surface one third of an inch in diameter, having an irregular circumference made up of numerous imperfect vesicles, which were slightly elevated at the edge and depressed in the centre. On the evening of the eighth day, Tuesday, November 30th, I exhibited my arm to the members of the Cincinnati Medical Society. In the after part of that night, I had severe inflammation of my whole arm extending to my elbow, and slight constitutional disturbance, as exhibited by a general malaise. My wife was similarly affected. After the tenth day, all symptoms rapidly subsided, and large crusts formed on our arms by the fourteenth day. Mr. Seaton, in his Handbook of Vaccination, page 113, speaking of revaccination, which he compares to spurious vaccination, says, "The scab, small and imperfect, forms generally on the eighth day and soon falls." Quite a number of the scabs of my revaccinations were large and possessed all the characteristics of a primary crust, and were adhering to the arm on the twenty-first day.

These cases and others led me to closely observe all my revaccinations from the 1st of November to December 8th. I made a record of the number, age, condition of primary cicatrices, date of revaccination, and the result. I have subdivided them into four classes: —

1st. Those in which the symptoms reached their height on the sixth or seventh day, with more or less of a vesicular development at the point

of insertion, and characterized by more or less inflammatory action of the arm, followed by rapid subsidence by the tenth or eleventh day.

2d. Those which closely resembled a regular primary vaccination in all their stages.

3d. Those which, while following the course of a primary vaccination, were characterized by high inflammation, involving the arm, axillary glands, and, it may be, the fore-arm.

4th. Those in which there were no results.

Below, I present the tabulated results of observations on one hundred and fifty-two private patients. Table A shows the condition and number of primary cicatrices and the results. Table B shows the results of the revaccination of fifty students of the Miami Medical College on November 30th. On the eighth day or rather the evening of that day, Tuesday, December 7th, I displayed the arms of twelve or fifteen of them to the Cincinnati Medical Society. They were those whose arms were most highly inflamed. Table C shows the ages of the patients by periods.

A.—TABLE OF 152 PRIVATE PATIENTS REVACCINATED FROM NOV. 1 TO DEC. 8, 1875.
AGES RANGING FROM FIVE TO SIXTY-TWO YEARS.

	Success- ful.	No Result.	Total.	Taken Partially.	Perfectly.	Severely.	No Result.	
One good foveated cicatrix.....	49	35	84	35	3	11	35	56 per cent. successful. } 62 per cent.
One superficial cicatrix.....	10		94	8		2		100 per cent. successful. } successful.
Two good foveated cicatrices.....	7	12	9	5	1	1	12	87 per cent. successful.
Three good foveated cicatrices.....	1	4	5	5		2	4	33 per cent. successful. } 85 per cent.
Three superficial cicatrices.....	11		22	8	1	2		52 per cent. successful. } successful.
Four good foveated cicatrices.....	2					2		100 per cent. successful. } 80 per cent.
Four superficial cicatrices.....	2	1	5	1		1	1	66 per cent. successful. } successful.
Six good foveated cicatrices.....	4				3	1		66 per cent. successful. } 74 per cent.
Six superficial cicatrices.....	1	12	15	3	3	4		77 per cent. successful. } successful.
Persons pitted with variola ¹	5	12	7	3				71 per cent. successful.
	104	48	151	65	13	26	48	

B.—TABLE OF STUDENTS (50) REVACCINATED NOVEMBER 30, 1875.
CONDITION OF PRIMARY CICATRICES AND RESULTS.

	Success- ful.	No Result.	Total.	Taken Partially.	Perfectly.	Severely.	No Result.	
One good foveated cicatrix.....	10	8	18	7	1	12	8	55 per cent. successful. } 50 per cent.
One superficial cicatrix.....	8	6	32	5	1	1	6	57 per cent. successful. } successful.
Two good foveated cicatrices.....	3	1	4	2	1		1	75 per cent. successful. } 80 per cent.
Two superficial cicatrices.....	12		6	1	1			100 per cent. successful. } successful.
Three good foveated cicatrices.....	3	1	4	3			1	75 per cent. successful. } 60 per cent.
Three superficial cicatrices.....		1	5				1	100 per cent. successful. } successful.
Four good foveated cicatrices.....	4		4	3		1		100 per cent. successful.
Four superficial cicatrices.....								
Six good foveated cicatrices.....	1		2	1				100 per cent. successful. } 50 per cent.
Six superficial cicatrices.....		1	1				1	successful.
Variola cicatrices.....	1		1		1			100 per cent. successful.
	32	18	50	22	5	5	18	

¹ If we add the student who had variola twenty years ago, and who was successfully revaccinated by me on December 5th, the percentage of successful vaccination of those who were pitted with variola or varioloid would be 75 instead of 71.

C. — AGES OF 152 PRIVATE PATIENTS.

Ages.	Class 1.	Class 2.	Class 3.	Class 4.	Total.	
1-15	22	6	4	16	48	31 per cent.
15-30	26	5	12	21	64	42 per cent.
30-60	11	5	13	11	40	27 per cent.
	59	16	29	48	152	

I was astonished at the number of successful revaccinations, and also at the severe constitutional disturbance attending some, and far exceeding the symptoms which usually accompany primary vaccinations. In attempting to account for the violence of these symptoms, I first turned my attention to the virus used, which was humanized lymph. During the same period, November 1st to December 8th, under the same conditions, and in the same families, with the same virus, I had performed thirty primary vaccinations in children, chiefly under one year of age. The only difference in my vaccination of primary cases was that I made three insertions by scarification, about one fourth of an inch each in diameter, and about one inch apart; while in revaccination I made but one insertion, and that by scarifying a surface whose diameter was from one third to one half of an inch.

All were successful and typical vaccinations, and were not attended by any inflammatory action, save the accustomed areola, and slight constitutional disturbance on the ninth day, except in two instances, and those were brothers, aged respectively eight and ten years of age; in them the inflammation involved the arm, axillary glands, and forearm.

C. P. Brent, M. D., of Cincinnati, had kindly supplied me with the virus, from which I had, by successful vaccination, obtained the stock I used. I called upon him and asked if he could give me the "pedigree" of his vaccine stock, particularly of that which he had furnished me, and also inquired whether any unusual symptoms had attended his vaccinations and revaccinations this season. In reply he stated that his knowledge of his vaccine stock extended back three years, during which time he was accustomed to keep up a fresh supply by vaccinating every two weeks. He said that he was uniformly successful in his primary vaccinations, and had observed nothing unusual in them, but that in his revaccinations he had been struck with the number which were successful this season. Being convinced that the vaccine virus was not at fault, I could think of no other reason for this extreme susceptibility to the vaccine influence, as well as the undue inflammatory expression of its action, than the recognized power of "epidemic influence."

In order to form some idea of the intensity of that power, I applied to the office of the Board of Health of Cincinnati, and learned that dur-

ing the period covered by my observations, from November 1st to December 8th, there had been 1031 cases of variola reported, of which number two hundred and eighty died. This, together with the fact that all the persons revaccinated had been directly or indirectly exposed to the disease, many having the contagion in their families or household, is probably the real cause.

Dr. Brent had observed this great susceptibility in his practice, but had not tabulated his cases. He could not tell what percentage had been successful, but he knew it was far greater than in former years. He distinctly remembered ten cases of revaccination which took as well as primary vaccinations. Seven of these had two distinct marks from their primary vaccinations, and three had one distinct mark each. As an experiment, he vaccinated a child with the crust from the arm of one of these persons, and it took as well as any primary vaccination he had ever seen. To test this latter vaccination, he subsequently inserted fresh lymph from a primary vaccination, and there was no result.

Dr. William Judkins has kindly furnished me the tabulated results of his experience in revaccination during this epidemic:—

Number revaccinated	85
“ successful	37
“ of failures	48

Of those which were successful, about one half took mildly and the remainder severely. Of the above, fifty-five were vaccinated with humanized lymph, and twenty-seven were successful — fifty per cent.; thirty were vaccinated with animal virus, and ten were successful — thirty-three per cent.

Dr. Thomas Wood, of Cincinnati, and Dr. P. M. Williams, of Cheviot, whose observations extend over twenty-five years, inform me that they have never known revaccination so uniformly successful and attended with such high inflammatory action of the arm.

Dr. L. A. Querner, physician of the Cincinnati Workhouse, informs me that he has revaccinated six hundred of the inmates of the workhouse with animal virus, and sixty-seven per cent. were successful.

Of the two hundred and two cases reported by myself, sixty-six per cent. were successfully revaccinated. Of this number forty-three per cent. belonged to Class 1, those who took it partially, and twenty-four per cent. belonged to Classes 2 and 3, those who took it more or less severely.

The Condition of the Cicatrix. — One hundred and twenty-six persons had but one cicatrix; of these, sixty-two per cent. took the vaccine. Of those who had good, foveated scars, one each, fifty-six per cent. were successful; of those who had superficial scars, one each, eighty-five per cent.; of those who had distinct marks of variola and varioloid, seventy-five per cent.; of those who had two, three, four, and six cica-

trices, the number is not sufficiently large to warrant an opinion. Nevertheless, as far as they go, they indicate that numerous cicatrices do not give more protection than one.

In one of the revaccinated students, two "supernumerary" vesicles showed themselves, and ran the same course as those formed at the point of the insertion of the virus. One of these vesicles, the most typical one, formed on the inner aspect of the arm at a point where no accident could insert it. Both Mr. Seaton and Mr. Simon say that supernumerary "eruptive" vesicles are extremely rare. These experienced vaccinators are not certain that they have ever seen any, regarding such supernumerary vesicles as they have seen as the result of accidental insertion of virus.¹

Among the students were two gentlemen upon whom the vaccine virus had never taken. One had had it inserted upon ten different occasions during his life, and the other twenty-two times; the last attempts were by myself, and the results were absolutely negative. There were no cicatrices upon their arms, and they never had had the virus inserted elsewhere. These persons belong to an extreme and small class who are, for the time being at least, *insusceptible* to vaccinia or variola. On the other hand there were two cases illustrative of the opposite extreme and exceptional class, those whom neither vaccination nor variola will protect from a future attack of variola, namely, the extremely *susceptible* class. The first of these cases was a boy of twelve years, having a good primal scar, in whom the secondary vaccination took well; yet on the twenty-first day, and whilst the crust was still adhering to his arm, he broke out with a well-marked but very mild case of varioloid. The scabs of the pustules were scarcely dry before he had a typical attack of measles; he is now well. The other case was a student, thirty years of age, who was vaccinated successfully in 1863 (primary) and has a good, large, foveated scar. On the eighth day of my revaccination of him, there was a vesicular eruption at the point of insertion, confluent and rather flattened in appearance; the areola, or rather the irregular inflammatory action, extended full two inches from the point of insertion. He felt quite feverish that evening, and returned home and went to bed, where he remained until discrete variola made its appearance three days after, and ran its course without any modifying influence from his primary or secondary vaccinations.

Dr. Snow, Health Officer of Providence, R. I., one of the ablest and oldest sanitarians of our country, and one who has given the most systematic attention to vaccination, is reported as saying² that "in all his experience he had never seen a perfect vaccination produced a second time in the same person." I have presented to the Cincinnati Med-

¹ Seaton's Handbook, page 96.

² Boston Medical and Surgical Journal, 1871, page 342.

ical Society, at its regular sessions, December 7th and 14th, over twenty students whom I had revaccinated, the evenings on which they were displayed being the eighth day of their vaccinations. The members have seen and can decide for themselves how typical their vesicles were. I wish particularly to call your attention to the arm of Mr. La Rue, whom I exhibit this evening, December 14th. He is just now entering upon the ninth day of his revaccination. You will observe that the vesicles are full, pearly, and umbilicated; the areola is now about one inch in diameter, and if there is a single indication of a perfect, typical primary vaccination wanting, I shall thank any member to call attention to it. Within one inch of these vesicles, you will observe the cicatrix of his primary vaccination. It is unusually large and deeply foveated; it is what may be termed a "superior mark." I also invite your attention to the arm of Dr. Fletcher. This is the eighth day of revaccination. You will observe that it has most of the traits of a primary vaccination. He had varioloid twenty years ago, and bears the mark of it.

The ages of my one hundred and fifty-two private patients ranged from five to sixty-four years of age. About seventy-five per cent. were under thirty, and over fifty per cent. were between the ages of twelve and twenty-five, corroborating the conclusions of previous observers that puberty often reestablishes a susceptibility to the vaccine influence. The average age of the fifty students was twenty-three years.

These observations may not justify any conclusion which eminent vaccinators have not already announced; yet so important is the subject, and so wide-spread the interest in it, that it will do no harm to call the attention of the profession to them.

I think a careful examination of the cases reported will warrant the following

CONCLUSIONS.

(1.) Exposure to infection and to intense epidemic influence largely increases the susceptibility of the system to the influence of vaccine virus, and accounts for the unusual number of successful revaccinations during the existence of an epidemic.

(2.) Variola and varioloid give no more protection from a recurrence of variola than vaccination.

(3.) The cicatrix is not a safe criterion of the degree of protection given by the vaccination from which it resulted.

(4.) It is advisable to revaccinate upon every exposure to infection, unless it has been done recently with success.

(5.) Those who are successfully revaccinated are to some extent susceptible to the variolous influence; not that all would take the infection (for an epidemic never attacks all the unprotected), but that they are in some danger is proven by the results of revaccination

in the hospitals and standing armies of Europe. In the Prussian army the annual deaths from small-pox, before revaccination was introduced, averaged one hundred and four. During the twenty years immediately succeeding the establishment of systematic revaccination, there were but forty fatal cases, and Simon says but four of them had been successfully revaccinated. Mr. Simon further says that since revaccination was made compulsory in the Bavarian army, in 1843, absolutely no cases of variola have occurred.

Mr. Seaton, in the Public Health Reports, 1873, says, "In every hospital report which has reached me, it is specially stated that not a single one of those officials (attendants amounting to more than three hundred) who have been revaccinated before coming to take duty at the hospital contracted small-pox, but a few cases occurred in nurses and servants who were not vaccinated."

RECENT PROGRESS IN THE TREATMENT OF CHILDREN'S DISEASES.

BY D. H. HAYDEN, M. D.

Diphtheria. — The following is an abstract of remarks upon diphtheria made by Professor Henoch at a meeting of the Medical Society of Berlin, held February 10, 1875.¹

The diphtheritic exudation, or process rather, is distinguished anatomically from the croupous by the fact that the former penetrates into and infiltrates the mucous membrane, whereas in croup the membrane is deposited upon the free surface of the mucous membrane. This distinction is not always a valid one, however, for it is a well-known fact that both forms are often met with in diphtheria in the same patient, the infiltrated (diphtheritic) mass being found in the pharynx, extending downward, sometimes as far as the vocal cords, while at the same time the bronchial tubes are covered with a loose membranous deposit (croupous).

We find it stated, too, by many good authorities (by Rilliet and Barthez for example), that the so-called croupous membrane does not always lie loosely upon the mucous membrane. When situated in circumscribed patches upon the larynx or trachea it is often found attached by fine adhesions to the subjacent tissue, necessitating a tearing of the membrane on its removal.

It happens not very rarely that in diphtheria the membrane in the pharynx is not entirely diphtheritic. Professor Henoch reports such a case. It occurred at a time when cases of diphtheria were coming into the wards nearly every day, and resembled the others in all its clinical

¹ *Allgemeine medicinische Central-Zeitung*, Nos. 66 and 67, August 18 and 21, 1875.

features. At the autopsy there was found a croupous deposit on the mucous surface of the larynx, especially in the neighborhood of the vocal cords. A deposit of the same character lay loosely upon the tonsils, being easily removable without loss of substance of the subjacent tissue. The tonsils were found on section to be infiltrated with a yellowish-white exudation. Henoch considers this case to have been one of diphtheria, notwithstanding that the membrane anatomically differed from that characteristic of this disease.

Croup, that is, the development of the croupous membrane in the larynx, was formerly described as an independent disease. In the Transactions of the Medical Society of Berlin, a few years ago, there was shown to be a difference of opinion as to the existence or non-existence of a primary croup, the older physicians considering it a fixed fact, the younger ones, on the contrary, holding that croup was always diphtheritic. An explanation of this difference of opinion is to be found in the fact that the experience of the former reached back to a time when diphtheria was of much rarer occurrence than it is now, or was never seen.

Professor Henoch, while convinced that cases of primary fibrinous croup do occur, admits that errors of diagnosis are easy, as, for example, where the diphtheritic membrane is situated on the posterior surface of the velum palati, or on the lowest portion of the pharynx. In such cases, inspection of the pharynx would show no membrane, and croup suddenly coming on, a mistaken diagnosis of primary croup could easily be made, the diphtheria in the pharynx being overlooked. An examination with the laryngoscope would, it is true, reveal the pharyngeal trouble; but the use of this instrument with infants is accompanied with great difficulty, and not often practicable. Such errors in diagnosis would be more likely to occur in hospital practice, where children while convalescing, or while sick with other diseases, contract later a diphtheria. How can such cases be recognized? The disease for which the patient entered the hospital presents symptoms so prominent that the first signs of a supervening diphtheria are generally not recognized until suddenly the symptoms of croup present themselves. To guard against error it would be necessary that every child in a hospital should be daily subjected to an examination of the pharynx, a practice much easier to advise than to carry out.

There will always be skeptics as to the existence of a primary croup, even should they meet with a case where the autopsy showed absence of disease in the pharynx. They would explain this with the assertion that it is not necessary that diphtheria should always affect the pharynx; that it can be situated primarily in the larynx, the pharynx remaining throughout unaffected.

To prove the existence of a primary croup there must be found a

disease characterized by a disposition to produce constantly a laryngeal and tracheal catarrh. Should there be developed from such a simple laryngeal catarrh a croup without any coexisting affection of the pharynx, this could only be regarded as an advanced stage of the catarrh, a so-called "plastic croup." Such a disease we have in measles, one result of which is always a laryngeal and tracheal catarrh. If now, in the stage of eruption, this catarrh, which is always present, takes on a croupous character, and at the same time the pharynx remains free, it cannot be denied that this is a primary inflammatory croup developed out of a simple catarrh.

The following case is reported as illustrative: A boy, three years old, was admitted into the hospital with measles in the stage of efflorescence; the disease had just made its appearance in the face; the temperature in the evening was 105° , the following morning 103° ; the characteristic laryngeal catarrh was so severe as to suggest the idea of a true laryngitis; inspection of the throat showed a simple angina with the eruption on the pharynx and soft palate; improvement had begun, and lasted four days, during which time there was no fever; suddenly in the evening there was a rise in the temperature, and during the night croup became developed. On the following day tracheotomy was performed, and a long membranous cylinder was removed from the opening which had extended below the bifurcation; still later, other portions of membrane were coughed up; on the tenth day the tube was removed, and the patient regarded as cured.

Such cases show, without doubt, that a complete croup can be developed out of a simple catarrh. At the same time, in proportion to the number of cases of infectious diphtheria, croup is met with extremely rarely.

In conclusion, for the treatment of paralysis following diphtheria, the subcutaneous injection of strychnia is highly recommended. The cure is thus made more speedy, although it is admitted that with time and patience the disease gets well spontaneously. Two cases thus treated are reported. In the first, a young girl eleven years old had in all six injections given on alternate days, in doses of one thirtieth of a grain. The patient had been taking previously iron and quinine without result. The second case was that of a boy ten years old. Ten injections in all were given, the first one forty-fifth of a grain, the other nine one thirtieth of a grain each. In both cases the injections were made in the back of the neck. There were no unpleasant after-effects. The rapidity of the disappearance of the paralysis after the beginning of the injections was a sufficient answer to any claim that the cure was a spontaneous one.

Professor Henoeh has used these injections with children in a large number of cases not only of diphtheria but also of prolapsus ani; and

with proper precautions there is not the slightest danger of any injurious after-effects. This treatment is also highly spoken of by Dr. Acker, of the Clinique in Erlangen,¹ and by Professor Demme, of the Children's Hospital at Berne.

Dr. J. Lewis Smith, in an article upon diphtheria,² draws the following conclusions: Clinical observations, of which during the last fifteen years there has been a great abundance, do not substantiate the theories advanced by Oertel, Buhl, Hueter, and other experimenters, that diphtheria is caused by bacteria. The author considers the cause of diphtheria to be something more subtle than the existence of these parasites, a substance not yet discovered, which so alters the tissues and the blood that these become a nidus in which the bacteria are easily and quickly developed, so that from being few and innocuous in the system, they occur in myriads.

Diphtheria, in most instances, is at the start a local malady, occurring from the lodgment of the diphtheritic poison at some point upon the mucous membrane, or upon the skin denuded of its epidermis, or upon an open sore. When thus localized it may by proper local treatment, applied early, be cured, and the system remain unaffected.

When the disease has a local commencement and the system becomes infected, this result occurs by the absorption of some of the morbid product, through the absorbents, or capillaries, or both, which connect with the seat of disease upon the surface. What this substance is which thus infects the system and produces the constitutional symptoms of diphtheria is unknown; and the relations of this substance to bacteria on the one hand and to septic poison on the other must be determined by future investigations.

There can be little doubt that the diphtheritic poison sometimes enters the system through the lungs in inspiration. Two modes of systemic infection are thus recognized: by inoculation upon one of the tegumentary surfaces, and through the lungs; modes in which other acute infectious diseases, as scarlet fever and measles, can be communicated.

It is customary to classify diphtheria with the acute infectious diseases. There are some points of difference however. It often occurs, for instance, in a secondary as well as in a primary form. Instead of being incompatible with other distinct morbid processes, diphtheria sometimes engrafts itself upon them. In New York, most cases of secondary diphtheria occur as complications of scarlet fever and measles. An interesting fact has been several times observed by the author, that diphtheria originating upon the inflamed surface in scarlet fever or

¹ Allgemeine medicinische Central-Zeitung, No. 18, 1875.

² American Journal of Obstetrics, August, 1875; also Diseases of Children, third edition, just published, by the same author.

measles may become dissociated, and spread as an independent malady. Thus, in one family, three children affected with severe anginous scarlet fever took also diphtheritic pharyngitis before the efflorescence on the skin had disappeared. A few days subsequently, diphtheritic pharyngitis appeared in the father without scarlet fever.

There is no doubt that there is a membranous croup quite distinct from diphtheria. At the present time, when the diphtheritic poison is so abundant in the atmosphere, we have certainly few cases of membranous croup which are not diphtheritic or do not become so. The explanation of the comparative infrequency of membranous croup may be that the exudate of true croup, by offering a nidus in which the diphtheritic virus lodges and multiplies, becomes transformed into a diphtheritic inflammation, just as we see scarlatinous pharyngitis become diphtheritic.

From the above views of the author as to the pathology of the disease, we should naturally expect to find an early topical treatment recommended as of the utmost importance. Clinical observations teach us that the gravity of this malady is in most instances proportionate to the severity of the local manifestations, at least in the commencement of the disease. If, therefore, we can limit the exudation to a small surface, or can remove it so that the inflammation from croupous becomes catarrhal at an early stage of the disease, the patient is probably safe. We destroy thus also the very inoculable specific virus contained in the diphtheritic membrane, the source of the greatest danger we have to contend against, namely, the communication of the disease to others; auto-infection is also prevented, for it can hardly be doubted that diphtheritic laryngitis, to which patients are so liable, not unfrequently originates from a transference of the virus from the surface of the pharynx to that of the larynx during inspiration. Another result which the author expects to accomplish by the local use of disinfectants, is the prevention of blood poisoning, whatever that poison may be, — bacteria, or a secretion of the bacteria, or a substance which is developed independently of these organisms, though associated with them.

Local treatment should not be painful. The day of escharotics and powerfully irritating applications has passed; and the expression "burning the throat," so often heard in families, is a misnomer as applied to the treatment of the present times. It is best not to attempt to tear off the membrane, for its forcible separation irritates the inflamed surface and provokes hemorrhage. In applying a disinfecting substance the object should be to make it penetrate the pseudo-membrane, and, if possible, to touch and bathe the surface underneath.

In the Catholic Foundling Asylum of New York, to which Dr. Smith is attending physician, diphtheria prevailed during 1874 and up to June 1, 1875. The sisters detect the initial symptoms, and have

began the local and general treatment before the daily visit of the physician. In the first five months of 1875, thirty-two cases occurred. Of these, only six ended fatally; three of laryngitis, and three of blood poisoning.

The mode of treatment employed with so good results, and by which the author, in his private practice, has saved a much larger proportion of cases than he had been able to cure by any other measures which he had previously employed, was the following: As soon as the case comes under observation, the following mixture is applied every second or third hour over the fauces by one or two applications of a large camel-hair pencil:—

Acidi carbolici	gtt. vj.-x.
Liquoris ferri subsulphatis	3 iij.
Glycerinæ	3j. M.

If there is discharge from the nostrils indicating diphtheritic inflammation of the Schneiderian membrane, a little of the same mixture diluted with an equal quantity of warm water is injected into each nostril every three to six hours. To do this, the child is placed upon its back, with the head thrown backward and the eyes covered with a towel, to prevent the liquid from entering them. A small glass ear or nostril syringe, with a knob or button at the end of the nozzle, is the best form of instrument for these injections.

One third to one half of a teaspoonful of the diluted mixture is a sufficient quantity to employ for each nostril. This application, properly made, prevents decomposition, removes the offensive odor, and, that which is of the greatest importance, prevents blood-poisoning; it immediately arrests the movements of the bacteria, and probably destroys them, as the author has observed in experiments with the microscope.

Quinine in doses of one to two grains, according to the age of the patient and severity of the case, is administered about every fourth hour, and each hour in the interval half a teaspoonful to one teaspoonful of the following:—

Potassæ chloratis	3j.-ij.
Tincture ferri chloridi	3j.
Syrupi simplicis	3iv.

A little chlorine is set free in the above mixture, and the quantity may be increased by adding a few drops of dilute muriatic acid. No drinks are to be allowed for a few minutes after its administration, or after the use of the brush; by this precaution, the lotion is not washed away too quickly from the fauces.

In three or four days, if the case progress favorably, these remedies are employed less frequently, but they are continued until not only the pseudo-membrane has disappeared, but the inflammation also has in great part abated. When the inflammation has begun to abate, and there is no reappearance of the exudation, a gargle or drink of chlorate

of potash in water usually suffices for topical treatment. In the treatment of laryngitis, no mention is made of tracheotomy. In diphtheritic paralysis, the author employs the elixir ferri, quiniæ, et strychniæ phosphatis, each drachm of which contains one sixtieth of a grain of strychnia; and by dilution with water the proper dose can be given to a child of any age.

If diphtheria occur in a family, not only is isolation from the other children imperatively required, but the fauces of these children should be examined daily, and if the least evidence of inflammation appear, the treatment recommended above should be immediately employed.

The author thinks favorably of quinine as a preventive in children who are so exposed to the diphtheritic virus that there is a strong probability that they will contract the malady, although the surveillance of the state of the fauces and the employment of special remedies is the most important.

As to the contagiousness of diphtheria the author writes. "Though observing and treating diphtheria, both in its epidemic and in its sporadic form, during the last fifteen years, I have not observed an instance in which it seemed to be communicated from house to house by the clothing, as we frequently observe in cases of scarlet fever and sometimes of measles. When it spreads from house to house, or even from room to room in the same house, I think that it is almost always by the visits of persons having diphtheritic inflammation. The area of contagiousness of diphtheria is therefore limited to the room in which the patient resides, or to his immediate vicinity."

(*To be concluded.*)

THE AMERICAN NEUROLOGICAL ASSOCIATION.

THIS octavo¹ of two hundred and fifty-seven pages is the result of the first convention of a society which we hope has before it a useful future in the way of stimulating both theory and practice in the difficult field of the nervous system. The volume contains a brief report of the proceedings, and twenty essays printed in full. The majority of these contributions are casuistic, but none are of trivial interest. A case of left hemiplegia, in which nothing was found but a clot on "the frontal convolution" of the same (left) side, may reasonably be doubted, since the reporter, Dr. Walter Hay, of Chicago, admits the examination of the brain to have been very imperfect. A method of treating paralysis by elastic relaxation of the muscles seems, in the hands of Dr. Van Bibber, of Baltimore, to have had good results. Dr. N. B. Emerson, of New York, states that the effects of free phosphorus cannot readily be obtained unless the remedy is given in larger doses than are often ventured

¹ *Transactions of the American Neurological Association for 1875.* Edited by F. P. KINNECUTT, M. D., and T. A. McBRIDE, M. D. Vol. I. New York: S. W. Green, Printer. 1875.

upon by timid practitioners, say from one twelfth to one eighth of a grain three times daily. Dr. A. McL. Hamilton describes a new form of hand dynamometer as both simple and accurate.

The longest paper in the book is by Dr. Schmidt, of New Orleans, on the general anatomy and action of the nerve-tissues. His complex unraveling of what are avowedly among the most difficult structures in the body to understand would command more confidence if he had described his methods of examination. The so-called ganglionic cell is, according to him, not a simple cell at all, but a plexus of fine axis-cylinder fibrillæ surrounding a "nucleus," and continuously passing in at one process and out at another. The "nucleus" is truly the cell; its "nucleolus" is the true nucleus, and contains two real nucleoli. This cell, not being continuous with the fibrils, cannot be supposed to take part in reflex action. Dr. Schmidt suggests that the influence of the fibrils may be simply trophic or formative; they may be "the central points or poles from which the tissue starts in its process of development out of a formless plasma, and which, after the development of the latter, superintend their normal waste and repair." The proper agents of the nervous reflex are the granules which are everywhere inclosed in the meshes of an exceedingly minute reticulation, which Gerlach has described in the gray matter of the cord, and which Dr. Schmidt has found in the most peripheral portion of the cortex of the brain. This reticulation results from the subdivision of most of the processes of the so-called nerve "cells," and is the channel by which alone the different nerve-fibres communicate with each other. All we can say is that Dr. Schmidt's results are very important *if true*, but that there are very few men living sufficiently skillful either to vouch for them or to reject them with plenary authority.

Dr. Webber, of Boston, gives a valuable Study of Myelitis, and Dr. J. J. Putnam, of Boston, *apropos* of a case of analgesia, gives good reasons for supposing that the different specific forms of general sensibility correspond to so many different modes of activity of the same nerve-fibres, and not to so many distinct sets of fibres, each with its own "specific energy," as has been supposed by Brown-Séquard and others. The article is a learned one, perhaps somewhat overcharged with learning, but it shows what may be made of a single case by "thinking it out."

When we add that there are papers by Dr. Hammond and by Dr. Lente, we have said enough to prove that the new society has made a creditable start.

MEDICAL EDUCATION IN GERMANY.

In a recent number we had occasion to allude to the absence of material changes for the better in the annual announcements of the various medical schools of this country. It is well for those contemplating changes to bear in mind that a fixed standard has by no means been reached elsewhere, and that even in Germany the leading minds are on the alert with reference to modifications which may lead to further improvement. Professor Billroth has lately published a volume,¹ the most comprehensive contribution that the cause of medical education has yet received.

¹ On Teaching and Learning the Medical Sciences in German Universities.

So experienced and accomplished a teacher has much to suggest, and many points are presented which concern all workers in so important a field. We select a few of the more general and fundamental ones to present to our readers, merely as suggestions, however, as any discussion of them would entirely exceed our limits. They are as follows: The physician should be thoroughly educated. In order that this may be brought about, time and money are indispensable, talent is desirable. Four or five years should be required as the least limit, and such persons as do not possess more than a certain amount of money, training, industry, and talent are earnestly advised to abstain altogether from the study of medicine. Those who have not sufficient money undertake a life of misery. Moderate talents and limited means do not permit the development of the talent, when so much time is demanded before the means can be increased.

From the first, the highest possible scientific education of the physician is demanded, for the methods thus obtained are those afterwards to be employed in the interest of the patient. Simple, exact observation is usually acquired only after much labor, and the earlier the training is begun the better are the results obtained. The study of the natural sciences should therefore be early entered into as an important part of the student's general education.

As a part of medical education there should be a certain limitation to their further pursuit. In chemistry one should go so far only as to acquire a moderate degree of technical skill, leaving advanced courses in animal, physiological, pathological, and forensic chemistry, as well as in chemical toxicology, for those who may be specially interested in those branches. The same applies to what may be called medical physics. The study of those subjects, together with that of botany, mineralogy, and zoölogy, should cease before the purely medical subjects are entered upon, though the departments should not be separated from those belonging to medicine in the more limited sense. The work thus laid out should not occupy more than the first year.

The remainder of the period suggested is to be given up to the various departments of medicine. These are anatomy, physiology, general pathology and pathological anatomy, materia medica and pharmacy, special pathology and clinical medicine, surgery and clinical surgery, obstetrics and clinical obstetrics, ophthalmology with clinical exercises, and social medicine, under which term are included medical jurisprudence, sanitary medicine, and hygiene.

In all these branches systematic study, for the sake of training, is absolutely insisted upon. This training can be acquired during student life only, and the scientific spirit then aroused is often destroyed by too early a development of routine practice. Billroth regards the results of this training as the level of mental life and feeling at which the individual is to live and move during his entire subsequent career. The necessary routine work may be acquired in six months of practice.

The faculty should be composed of a professor for each of the nine departments mentioned. These should be supplied with laboratories, collections, and assistants. The clinics should likewise be under the control of the university. The faculty should be neither increased nor diminished. A large one loses unity of action, the effect of each member upon the rest is enfeebled,

and the interest of the whole becomes blunted. In a smaller faculty, if harmonious, certain subjects are neglected; if not harmonious, discord and confusion result. When vacancies arise they should be filled by the remaining members. Assistant or adjunct professors, if admitted, disturb the proper balance by giving undue prominence to the department they represent, thus conflicting with the interests of other departments, giving rise to irregularity of work, and leading to dissension and indolence.

One other point treated of is of so much importance that with it we close our reference to this invaluable work. This is the relation of special departments to general ones. Systematic lectures on general medicine and surgery are essential as preserving a broad view of the subjects treated of. The existing tendency to solely demonstrative special courses destroys comprehensive scientific teaching, and encourages attention to the purely practical alone. The general clinics should be thoroughly such, and should contain all forms of disease. In the medical clinic, for example, the student should see in constant daily use the various instruments of precision in diagnosis, whether the laryngoscope, the ophthalmoscope, the battery, or the stethoscope. In the surgical clinic he should find patients with diseases of the skin, of the larynx, of the genitals and sexual organs, as well as with fractures and dislocations, cuts and bruises.

If sufficient material exists for the establishment of special clinics, there is no objection to their presence, but similar cases should not be lacking in the general clinics. The student is thus enabled to see the clinical professor as a complete whole, whether he directs the surgical or the medical department.

MEDICAL NOTES.

— Professor Billroth has lately written an article on medical education in Vienna, reflecting somewhat severely upon the present system of teaching as practiced in that city, as well as upon a certain class of students who frequent that school. This class consists chiefly of poor and uneducated Jews. The book has excited great criticism in the Vienna journals, which are edited chiefly by the Jews, has naturally caused much indignation among some of the students, and, we believe, has been the subject of discussion in the Austrian house of representatives. The excitement finally culminated at an ovation arranged for the professor by his friends. The opposition party, being strongly represented, raised a vigorous hiss, and both sides finally came to blows. A rough-and-tumble fight ensued, and order was with great difficulty restored. The affair has caused much excitement in Vienna. We notice this week at length Billroth's article, which is an able contribution upon this important subject. It may be a consolation to American physicians to know that they are not contending alone against the evils of slovenly methods of education. The advocates of the "preliminary examination" will, on the other hand, feel much encouraged by this able testimony to the folly of attempting to promote an ignorant class of men to a learned profession by means of a medical diploma.

— We would call the attention of our readers to the plates recording the pulse and temperature curves, appearing in the present number. The advantages of such a method of illustration could hardly be better demonstrated than in the present case. These plates are so arranged that by a simple device they can be made to record any set of curves desired.

— The students of the University of Vienna have formed a society for scientific purposes, to the membership of which the professors are likewise admitted. The last report of the society, giving an account of its proceedings from April to November, 1875, shows that forty-six professors have enrolled themselves as members. By contributing fifty florins, the donor receives the title of founder (*fondateur*). There are numbered in the society thirty-one honorary members, thirty-two founders, fifty-two assistant members, one hundred and fourteen professors, and four hundred and ninety-nine students; total, seven hundred and twenty-eight. The library of the association has two thousand seven hundred and ninety-nine volumes. A room is especially devoted to periodicals.

The facilities afforded by the society for the perusal of periodicals are considered of great value. The students have an excellent opportunity for study and research. Science, which in our day goes at a very rapid pace, is to be found first in periodical publications before appearing in books. It is therefore indispensable, if one wishes to keep constantly advised of scientific movements in the various parts of the world, that he should have at his disposal a great number of periodicals, and have them not at the end of the year when they are complete in volumes, but at the time of their publication.

The Germans have of late entered enthusiastically into the work of increasing the scope of their public libraries. At Berlin the Royal Library furnishes to its readers, who include the men who are first in science, more than eight hundred periodicals and scientific journals. The University of Göttingen and the Academy of Music at Geneva afford similar advantages.

— Under the heading Notes on Fiji. *The Lancet* gives some particulars of this recently acquired British colony. The Fiji Islands are about two hundred and fifty-five in number, eighty of which are inhabited. The most important are mountainous, rising from two thousand to four thousand feet above the sea level, with unusually large rivers and extensive deltas at their mouths. The present white population is estimated at two thousand, seventeen hundred of whom are British subjects, and the rest German and American. The mean temperature is from 78.9° to 80° Fahr. Hitherto Fiji has been extraordinarily free from tropical diseases. Yellow fever, cholera, ague, and remittent fever are unknown, rheumatism is rarely heard of, and the venereal diseases are very rare indeed, as intercourse between the Fijian women and the white men is almost unknown. "Kara" drinking induces some amount of delirium tremens. Influenza is occasionally endemic and productive of considerable mortality among the natives. Diarrhoea and dysentery are the only diseases at all common or severe, and they seldom assume an epidemic form. The most active agent in the production of dysentery seems to be the water, which in periods of dry weather becomes scarce and strongly impregnated with decomposing vegetable and animal impurities, an evil which is increased by

the neglect of all sanitary laws and precautions. A peculiar skin disease called "coka" exists to some extent among the natives. It is non-febrile, consisting of numerous ulcerated tubercles raised considerably above the level of the skin, and situated most commonly about the angles of the mouth, but also affecting all parts of the surface of the body. The tubercles vary in size and shape, and may number from two or three to as many as fifty in the same subject. Children under three years of age are almost invariably affected with it. Elephantiasis is somewhat common among the natives of certain islands. As to the effect of the climate on the white population, it appears that the resident settlers, as compared with new-comers, are distinguished by a spareness of frame, a somewhat sallow complexion, and a hard keenness of expression akin to the American type.

LETTER FROM WASHINGTON.

MESSRS. EDITORS, — A sufficient time having now elapsed to allow a careful and thorough microscopical examination of the spinal cord of the late Vice-President Wilson, nothing remains to be added to what has already been published with regard to the case, save that in the cord there were found a considerable number of amyloid bodies, and that the line of demarkation between the gray and the white substances was not well defined.

The only active interest which the profession here has manifested, so far, in the coming Centennial, apart from the sending of delegates to the annual meeting of the American Medical Association, has been in the appointment of Dr. S. C. Busey to the International Medical Congress. But a general interest in its objects and aims has been manifested, and the city of Philadelphia is within such easy access that in all probability a goodly proportion of the profession will be in attendance.

We are not behindhand in this city with regard to the prevention of cruelty to animals; while New York has its Bergh, Washington has its Gatchell, a fact which has been brought to the notice of medical men on being called to testify as to the possibly injurious effects of early training in gymnastic exercises. This seems to have been the question at issue in a case where a boy nine years of age was taken from those who were his guardians, athletes by profession, and who were exhibiting with him at a place of amusement in this city. Evidence showed, if we may trust to newspaper reports, that these men were his relatives, and that the boy was fond of his mode of life and did not consider his training in the light of cruelty; in fact, when the order came from the judge to separate the lad from his guardians, the scene is said to have been very affecting. This left simply two points to be considered: the peril to life and limb in these exercises, and the injurious effects of training upon so young a constitution. The first was evident, but not more so than may be shown daily in the gymnasiums of our large cities and with boys of a larger growth, with whom these possible injuries might lead to more serious results. So that the question resolved itself simply to one of training, and it is curious to note that we do not possess among our English text-books any formularized data to throw light upon this subject. The physical training of young men, college

students for example, has engaged the attention of our English brethren with reference to derangements of the circulatory system; and Da Costa, in one of the Toner lectures, has given us valuable data on the same subject. Flint, in his Physiology, discusses training, it is true, more particularly, however, in relation to the subjects of food and the development of muscular tissue; but he handles his topic in such a manner as to make us wish for a more systematic and special treatise from his pen. Indeed, it is a question which comes home to many of us, whether we are not inclined to foster that spirit in boys which leads them to seek high places and attempt perilous feats for the sake of the steadiness of nerve and the self-confidence thus acquired; and nine years is about the age at which we send boys to the gymnasium, where they soon learn to perform feats that to the uninitiated appear perilous and injurious in the extreme. Stewart's gymnasium in your city (if it has not long since become one of the things of the past) could show among its records the names of many boys of tender age who were expert gymnasts. In the case above alluded to the evidence did not show excessive training, so that we question the propriety of the action of the bench. Of course public sympathy was with the judge, for the place of amusement was itself of that class which gratifies a low order of taste, and it is easy to excite sympathy without reason in such cases.

With regard to Columbia Hospital, since our last communication the directors have selected a list of names from the profession to act as an advisory board, and among them are representatives from the faculties of both medical colleges; the list is very well selected, save that there has been an almost total ignoring of the dispensary staff, members of which have served the hospital for years, and even independently of this are equally deserving of recognition. The action of the directors has a salutary look, but whether it means more than the conferring of an empty title, as in times past, remains to be seen. There is, however, this difference: formerly the surgeon in charge made the appointment; now the directors assume that duty, and lay down well-defined rules for the guidance of the staff.

The medical profession here, owing to a combination of unfortunate circumstances, attained in times past an unenviable notoriety. Unfortunately, a storm of troubles culminated at the date of the last meeting here of the American Medical Association, in 1868. This being a border land, as it were, where were settled men from both sections of the country and having markedly opposite opinions, and where the first essays in the solution of political problems were attempted by those in power, it was natural that dissensions should arise. Now, however, it would seem as if a unity of purpose pervaded the profession for the common advantage. Among those with what are called the advanced ideas of the present day there are still objects to be attained which, if pressed too forcibly and persistently, would again cause the bubbles of toil and trouble to rise to the surface. With judicious discretion these men are quietly working their way and gaining ground with time. The two questions of color and sex have still many prejudices to contend against.

The organization of the societies here is curiously constituted. In 1819 the Medical Society of the District of Columbia was chartered by Congress, a right being granted to license practitioners of medicine within the District

under certain conditions, and this license being made the only authority under which suits for fees, etc., could be recovered at law. A distinction was made also between licentiates and members, the former not having the privilege of attending the discussions of the society, except upon invitation; but at the same time the society was denied the power of governing in any way the ethics of the profession. Consequently, to meet this last want, there was established, in 1833, the medical association, a voluntary organization independent of Congress, and designed to regulate the fee-bills and the ethics of the profession here. One of its rules is to the effect that after a practitioner shall have been six months a resident of the District, he shall not be entitled to consultations until he becomes a member of the association. Now, with regard to the colored race, of which we have several of fair standing in the profession, they are licentiates of the society, but not members; for a membership they must wait until the members look upon them as suitable companions; they are deprived of nothing except the privilege of discussion, and when admitted to membership they will be admitted because of personal qualifications, and not as a body. In the association, on the other hand, there is a different condition of things; exclusion from this body means a denial of recognition in consultations and of the common privileges of medical etiquette; but here, instead of the admission of these colored men to membership, a saving clause is put in, permitting consultations with them. A singular discrepancy or inconsistency is evident here, which does not seem to be worthy of the association; on the one hand, while it will take no steps to bring these men under its control, it allows them all the privileges of the association that are worth anything; on the other hand, because of prejudice, it breaks through a rule which is the foundation of the association. It would seem as if the colored doctors had rather the best of it.

As to the female doctor, she is nowhere; a licentiate, and that is all. And there must perforce be ere long an agitation of this question; it has been brought up before, and the sentiment grows each time more favorable to a recognition of woman's rights and privileges. There are not many female doctors in this city, but there are some who are women of refinement and culture. One of them, not long since, while complaining of the false position in which she stood, was heard to say that she "could get plenty of doctors to consult with her, but they were not of the class whose opinions she desired." Many of these very men had been loud in their opposition to her admission to the association.

Our medical society is by no means instituted for mutual admiration; on the contrary, the discussions frequently are long and furious, with an occasional dash of personality which leads eventually to explanations and counter-explanations. If we may be permitted to be critical, certain practical amendments might be introduced which would tend to improve it; among these is a strict adherence to the rule requiring the announcement beforehand, when practicable, of papers and specimens to be presented, so as to allow a proper preparation for debate. This is opposed by some who pride themselves on being ready speakers and on having a wide range of knowledge, but this opposition is injurious in a high degree to the earnest man who wishes to be sure of him-

self and of his subject. Again, the reports at stated intervals of the progress of medicine in some special line, by those more expert than the general practitioner, would, as in other societies, increase greatly the general knowledge. This society, however, is doing good work, as is shown by its Transactions, published quarterly; its meetings are well attended, its discussions are earnest, and its pathological specimens are accumulating. We say accumulating, but we do not mean in the sense of preservation in the society's own museum; the Army Medical Museum absorbs everything, for there is no other collection of pathological specimens in the city, save a few straggling remnants, in the National Medical College, of what was once a valuable museum, but which time and want of care have scattered. When the Washington Infirmary was burned, there was no property of any consequence belonging to the college within its walls.

It is interesting to note in this connection the influence of the army medical department upon the profession. We are greatly to be envied in having access to so complete a collection of medical works as the library, to so full a collection of pathological specimens as the museum; but, on the other hand, if a post mortem is to be made, one of the employees of the department performs it, and secures the specimen. This has been so long the custom that but few of the men who date the beginning of their practice a few years back have any experience in post-mortem examinations, or will trust their own skill; nor do they ever think of preparing or preserving specimens. To be sure, we know that the work will be well done by the army surgeons, and that the specimens will be duly appreciated. But these specimens become the property of the government, and access to them is restricted to such regulations as the medical officer in charge may from time to time see fit to make. Again, the great majority of microscopical examinations are made by or under the supervision of Dr. Woodward; this is a great advantage for microscopical science, but it diminishes the stimulus to individual workers. The library is open from ten to three o'clock, but the books cannot be removed; these hours are the busiest with most practitioners, and, were they not so, it is difficult for those who are in the habit of closeting themselves in their studies to pursue those studies amid the disturbances incident to a large library. It is true that the gentleman in charge, Dr. Billings, is remarkably courteous in relaxing the rules and giving every aid possible under suitable circumstances; but this is a personal favor and cannot be otherwise, and one cannot help questioning what would be the effect of a change in the ordinary routine of army duty; perhaps the new librarian would not be so favorably disposed.

In practice during the war there was the singular anomaly of army officers and soldiers employing civil practitioners and paying their fees because of a want of confidence in the army surgeon, and civilians employing the army surgeon because they thought him more skillful than any one else. The population here is largely made up of army and navy people, who, with their friends, employ army and navy doctors; these friends were very numerous at one time, and got their advice and medicine free. This latter gratuity has been stopped or placed within narrow limits; but advice is still given, and, no fees being charged, the effect is apparent.

Another element which is a heavy load for the profession to carry is the number of clerks holding office who are practitioners of medicine; they try to justify themselves by saying that as soon as their practice warrants it they intend to resign.

Homo.

WASHINGTON, D. C., January 14, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JAN. 22, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	600	29
Philadelphia	800,000	319	21
Brooklyn	500,000	255	26
Boston	342,000	182	28
Providence	100,700	27	14
Worcester	50,000	18	19
Lowell	50,000	12	12
Cambridge	48,000	16	17
Fall River	45,000	13	15
Lawrence	35,000	8	12
Lynn	33,000		
Springfield	31,000	8	13
Salem	26,000	8	16

Normal Death-Rate, 17 per 1000.

BOOKS AND PAMPHLETS RECEIVED. — The Body and its Ailments. By George H. Napheys, A. M., M. D. Philadelphia: H. C. Watts & Co. 1876.

Medical Thermometry and Human Temperature. By E. Seguin, M. D. New York: William Wood & Co. 1876.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held on Monday evening next, at eight o'clock, at the hall in Temple Place. Dr. Webber will read a paper on Infantile Facial Paralysis.

MESSERS. EDITORS, — Now that the speculum has become the medical man's vade-mecum, I feel sure that any new discovery in uterine pathology will be hailed with joy. I hasten therefore to inform you that there are at the present moment no less than five young ladies in a suburban town who are confined to their beds by "womb complaint caused by nothing but taking cold while stepping on and off the steam-cars;" at least so says the lady practitioner who visits them daily. To those of us who are still lacking a pretense for examining such of our female patients as have not yet passed through the ordeal, this newly-discovered cause of disease will prove a blessed boon. Nor is medicine the only industry which may be benefited. I see in the dim future patent protectors, and other "fixins," as well as suits for damages brought against those companies whose car-steps exceed a certain height. Science has indeed made a stride (straddle, one might say) in advance, and I would humbly suggest pleurisy of the uterus, or broncho-pneumonia of the ovum, as an appropriate name for this centennial disease, and remain yours truly,

QUACK.

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THE CURETTE IN DERMAL THERAPEUTICS.

BY EDWARD WIGGLESWORTH, JR., M. D.

FOR the purpose of scraping away the mucous membrane of the uterus in endometritis fungosa, the curette was devised by Récamier and adopted by Nélaton and others.¹ For ulcerated uterine carcinomata with superjacent fungous masses, and for chronic hyperplastic endometritis of the body of the womb, it is now employed by Olshausen and many other gynæcologists.² The form of the instrument employed is usually that of Sims's curette, an improvement upon Récamier's, or Locock and Simpson's "uterine scraper," originally intended more particularly for the removal of the mucous membrane over submucous fibromata, in order to still bleeding.

It is to Volkmann, of Halle, that we owe the introduction of the scoop into the practice of dermatology, in which the superiority of its merits over those of the knife, of the *écraseur*, or of caustics, is in many cases very marked.

Different forms have been given to this instrument by Daniells, Schede, and Simon of Heidelberg. That of Simon, somewhat modified, is the one I prefer. The spoon of the scoop should be oval, its long axis being that of the whole instrument. The edges must be very sharp. The shaft should curve slightly, so that the distal end of the spoon alone rests upon the skin. The spoons should be of different sizes to meet varying indications; the shafts of the same size, that they may be screwed into the handle, which should be large enough to afford a firm hold, and be also somewhat roughened. In this way a handle and from three to six blades or shafts, with scoops of varying sizes, may be carried in a case for the pocket. Codman and Shurtleff have made for me the most exact copies of the foreign instruments furnished them.

For the last three years the dermal curette has been employed in Vienna, and in the *Bericht der Klinik und Abtheilung für Hautkranke des Wiener k. k. Allg. Krankenhauses* for 1874, by Dr. Hans Hebra, the good results of the treatment by means of it of various cases of epi-

¹ Trousseau. *Gazette des Hôpitaux*, No. 21, 1856.

² *Archiv für Gynækologie*, i. page 9.

theliomata, lupus, and especially lupus erythematoses, are given at length.

I have used the scoop as yet in but three cases, two of lupus erythematosus of the face and one of very extensive lupus of the lower leg; in the latter case the patient was etherized. The results have surpassed my anticipations, and in fact left almost nothing to be desired. The time required for the operations was short. The number of operations called for was small. The pain was less than from the use of caustics, and did not last after the conclusion of the scraping process. The time required for a cure was very greatly reduced. There was no expense for medicines. The appearance of the site of the preëxisting disease approximates more nearly to that of its original normal condition than after the use of any caustic. The patients express great satisfaction, one of them saying, "I shall never let any caustic be used upon me again as long as I live."

In the *Wiener medizinische Wochenschrift* for December 18, 1875, Dr. Hans Hebra gives a *résumé* of the results of his three years' experience with the curette in the wards of his father, Professor Hebra, at the royal imperial general hospital of Vienna. The instrument which he uses is made so that the shaft shuts into the handle of the instrument in the manner of a knife-blade.

The indication for the use of the scoop is a large extent of diseased tissue to be removed; small, discrete, pathological formations imbedded in the normal tissue being less well adapted for this method of treatment.

Of the superficial new-formations, epitheliomata are most easily scraped out; next, lupus vulgaris; while lupus erythematosus needs often a more thorough application of strength. There is no danger of scraping away too much; the difference is noticed as soon as healthy tissue is reached. Especially in epitheliomata, also, must great care be taken to thoroughly remove the hard border; otherwise, a return of the disease is to be feared. The bleeding resulting from the use of the curette is usually slight. Wet lint or cotton batting and slight pressure are always sufficient to stop it. There is rarely any fever after the operation.

From two to three days after the scraping a thin, yellow, apparently diphtheritic membrane appears upon the wound, but it means nothing, and results merely from necrosis of particles of tissue which were crushed during the scraping process. In three or four days more this membrane is thrown off, leaving a granulating, healthy wound. If the scraping has been thoroughly effectual, this wound heals with a smooth, soft, rosy cicatrice, a more elegant result than is obtainable from any caustic. For lesions of the face or over joints this procedure is therefore peculiarly adapted, and Dr. Hebra specially mentions cases of lupus over the joints of the fingers, where, after scraping and cicatrization, the

mobility of each individual inter-phalangeal articulation was absolutely perfect.

The scoop may also be employed in the treatment of other diseases of the skin as well as for new-formations. Thus, the elevated, circumscribed, infiltrated patches of chronic eczema may often be with advantage removed in this manner. The callosities of dissectors, butchers, tanners, etc., occurring usually on the backs of the fingers or hands, and yielding but slowly to other remedies, are speedily removed by the curette. Small new spots of psoriasis may be thus removed, and the spread of the disease, as far at least as these foci are concerned, is obviated. Still, relapses are possible. Even old cases of sycosis with much pustulation and papillary hypertrophy may be healed more quickly than by any other means, if the scoop is employed to remove excrescences, and thus open avenues of exit for the deep-seated pus. For the enlarged sebaceous glands of the nose and forehead following severe attacks of variola, and leading at times to lupus erythematoses, the curette may also be used, preferably soon after convalescence from the variola, and the whole tract affected, together with its scars, may be removed with the result of an improvement in the personal appearance. So also in cases of acne vulgaris and rosacea, when specially severe. In various kinds of ulcers, also, the use of the scoop is particularly indicated. Varicose ulcers of the leg often yield more readily to this treatment than to any other; so, too, strumous swellings of the skin and glands. In cases of scrofulous suppurative adenitis the adjacent healthy skin may be preserved by cutting an aperture over the gland with scissors, provided none already exists, and then scraping out the entire gland-cap-sule with a small curette.

In all these cases we have had to deal with lesions where the epidermis was in an abnormal condition. But the scoop is adapted as well to another group of affections of the skin, namely, lesions due to excess of growth, but in which the epidermis remains uninjured. Thus, warty or hypertrophic naevi and pigment-stains, if small, may be removed at one sitting; if they are large, it is better to destroy a part only at once, thus causing less irritation and producing a cicatrice more closely resembling the normal skin. Vitiligoidea plana or xanthoma palpebrarum is best removed by a small pointed spoon inserted under the epidermis through an aperture artificially made. In this way the entire formation may be removed without loss of blood and without causing the slightest ectropion. Dr. Hebra mentions a case of teleangiectasy thus treated. To his great surprise the loss of blood was very slight, and the bright red spot became much paler after one moderate scraping, which could not, however, be repeated, as the patient, who was in the hospital for another disease, recovered and left.

Many venereal and syphilitic lesions, also, may be treated with ad

vantage by means of the curette. Pointed condylomata, if removed by scissors, return speedily if too little has been snipped away, and if too much is removed, there is a needless loss of substance. The use of the scoop obviates either danger. The base must be thoroughly scraped out. The consequent bleeding not infrequently calls for the employment of some styptic. Broad syphilitic condylomata, from the softness of their component tissues, can be speedily removed. The cure is as speedy from the use of the curette as by any other means, and the severe local pain and inflammatory œdema, as well as the possibility of salivation from mercurial applications, are in this way avoided. Syphilitic ulcerations, like others, often yield most readily to this treatment.

Many other conditions might easily be cited in which the use of the curette would be indicated, but we have said enough to call the attention of the profession to a means of treatment easy of application, cheap, as painless as possible, and giving more speedy and better results than any other as yet known.

MASSAGE IN AMENORRHŒA AND DYSMENORRHŒA.

BY DOUGLAS GRAHAM, M. D., OF BOSTON.

CASE I. At fourteen years of age, Miss — began to menstruate, and this function continued to recur for three years and a half, but was always from ten days to three weeks too late. The menses then ceased for two years and a half, and no local cause could be discovered to account for the interruption. During this interval, tonics, emmenagogues, horseback riding, and a year's travel in Europe were tried, but apparently without effect. Though the physical condition of the patient seemed to be good, — her body well nourished, her complexion ruddy, her sleep and appetite fair, — yet she became more and more low-spirited. For this condition she, or rather her relatives, sought the advice of Dr. Tyler. He at once advised a thorough trial of massage.

In January, 1875, when I began giving her massage, the patient had been in the habit of walking two or three miles daily in suitable weather; but it was only from a sense of duty, and with great effort and disinclination that she did anything, physical or mental. There were no sanguine expectations on her part of benefit from any treatment whatever.

The mode of procedure was manipulation of the whole body, with percussion of the back, resisting movements (acto-passive motion) of the feet, legs, and thighs in all their natural directions, particularly those of abduction and adduction; this treatment was administered every other day. After seven applications of massage, the menses came, and lasted three days, though rather scanty, having been suspended for two years and a

half. Throughout the following month the same treatment was continued, with a view of increasing nerve force, but resisting movements were omitted until within a week of the next expected monthly period. At this time Dr. Tyler prescribed, in addition to massage, tincture of guaiac, in which gin was the menstruum. The menses, this month, appeared five days after what is considered the proper period, though formerly at the best they had always been from ten days to three weeks too late. All treatment was now discontinued until within a week of the next expected return, when tincture of guaiac and massage were resumed. The catamenia this time did not appear until nineteen days after the proper date; this delay was attributed by the patient's friends to the discontinuance of treatment for three weeks. This view would seem to be somewhat favored by the result of the ensuing month, for massage and guaiac were renewed two weeks prior to the hoped-for event, and exactly twenty-eight days from the last flow menstruation recurred again. The quantity each time after the first was what the patient considered about normal. Her mental condition was not improved.

At the first visit this patient's tissues seemed to me to be exceedingly dense, matted, and inelastic; at the fourth visit I found them more supple and elastic, in consistence with her easy mode of living.

In marked contrast with the condition of the tissues observed in the previous case, and with the probable effect of massage upon it, is the flabby, atonic state of muscles resulting from long illness in the following case.

CASE II. After unusual exertion and anxiety in nursing her mother and sister, Miss A. suffered great nervous prostration. The trouble at first, the patient said, was all in her head; she was very sleepless and had frequent attacks of hysteria. Several months later she was seized with intestinal catarrh, and as this was accompanied with great pain it aided very much in reducing her. From this she gradually recovered so as to be able to sit up for a few minutes at a time. A persistent back-ache and profuse leucorrhœa appearing called attention to the uterus, which was found to be anteverted. When tenderness had subsided so as to admit a Hodge's pessary, this, with a bandage around the abdomen, afforded great relief. Menstruation was regular as to time, though painful and scanty, lasting but a day and passing only when the patient was sitting up.

In the mean time the hysteria continued, at times closely simulating peritonitis, and her physician, Dr. Nichols, of Cambridge, informed me that hysterical convulsions, mania lasting from a few hours to several days, and transient aphonia were also of common occurrence. Injections of asafœtida alleviated these attacks, and a course of tonics and electricity had improved her so that she could be up four hours daily,

an hour or two at a time. Excepting the occasional use of a vegetable bitter, nothing had been administered for two or three months, when Dr. Nichols "was led to suggest massage because he thought the muscles might in this way receive the exercise which they so much needed, and which the patient could not or would not take in the ordinary way."

Massage was begun in this case in May, 1875, when the patient had been an invalid for over two years. At this time she was taking nothing but a gentle laxative every day. Careful manipulation alone had to be used in this case, as anything like acto-passive motion, except of the feet and arms, was very apt to give rise to abdominal pain, which was frequently referred to one or the other of the ovarian regions, and sometimes followed by hysterical convulsions. After my second visit the laxative was laid aside in the hope that the kneading of the abdomen would produce the same effect; in this we were not disappointed, as she had a natural daily dejection, without medicine. I visited her two or three times a week, and employed massage ten times before her next monthly period. When this arrived the menses came, somewhat to our surprise, while the patient was lying down; the flow appeared in that position the first time in sixteen months, and lasted two days (whereas the usual duration had been but one), with much less pain and bearing down than had been habitual. She was under massage two months longer, and in each the menses came with less discomfort, and while she was in the recumbent posture. This improvement has continued, as I have since been informed.

With regard to the aches, those of the back and head, as well as the uncomfortable feelings in the abdomen, were alleviated at each application of massage, and the patient was greatly soothed, sometimes to sleep. The cold hands and feet were made warmer, not merely for the time, but permanently. The muscles gained in size and firmness, and the patient walked with much less scuffling of the feet and went up and down stairs naturally. But still she was a great invalid, unable to ride in a carriage without suffering pain in the back and abdomen, though she could walk two or three squares with ease. I think that in her great desire to get well she rather overestimated her improvement. Dr. Nichols has recently written me as follows: "That benefit has resulted from the massage seems to me clear. The muscles, especially of the legs, are stronger. With these changes has come improvement in other directions. The severe headaches have mainly disappeared, the catamenia are more natural in quantity, and the pain has greatly abated."

Dr. Stoddard, of Northampton, has very kindly sent me his notes of the two following cases in which he employed massage, not by relegating it to the nurse or one of the patient's relatives, as is usually the way, when it is almost sure to be done in a slipshod manner, or, what is worse, overdone, but by applying it himself.

CASE III. "A patient of a spare habit and decided nervous temperament, suffering from chronic inflammation of the uterus, with ulceration, and from nervous prostration, in addition to other troublesome symptoms, was the subject of obstinate sleeplessness, which had obtained for some time before she came under my care. 'Nature's sweet restorer' was usually sought in vain until three or four o'clock A. M., when a couple of hours of uneasy slumber were obtained. At my suggestion she had used various remedial agents, — chloral, bromide of potassium, lupulin, hyoscyamus, and morphine, alone or in combination, — for several weeks, but with indifferent success. One evening I was induced to employ massage for the first time in her case, in the hope of relieving the reflex pain in the back and limbs, which at that time was especially troublesome and persistent. The application proved so agreeable to my patient, and so promptly and effectually relieved the pain for which it was employed, that at the same sitting I extended its use to the rest of the body, and with a very gratifying result; for soon after I left her, a drowsiness which was then quite evident passed into a quiet and refreshing sleep, from which she did not awake until six A. M. Its subsequent employment in this case has never failed, except when severe pain has been present, to secure for her a good night's rest. Furthermore, its regular employment three times a week, for about three weeks after the first trial, not only much improved the capillary circulation, which had been quite languid previously, but seemed to be largely instrumental in securing a regular and healthy menstrual flow, after an absence of at least six months. A variety of emmenagogues had previously been prescribed without effect.

"I take this occasion to state that at the time referred to, this patient had been taking for some weeks a preparation of quinine, strychnia, and phosphoric acid, and was under local treatment for the uterine inflammation, and that in my judgment important indications were met by massage when other remedial agents proved inadequate or were slowly operative. In the case of the same patient, a nervous headache, to which she had been long subject, was always much alleviated by the application of massage to the head."

CASE IV. "I have under my care another patient with uterine inflammation of eight or ten years' standing, characterized by an enlarged and indurated cervix and retroflexed body of the uterus, with marked menstrual irregularity and with severe dysmenorrhœa. When she came under my care, some two years since, the approach of the menses was accompanied by excessive pain and a series of hysterico-nervous convulsions. She was also the subject of a variety of reflex symptoms, among which may be cited, as most prominent, pain and tenderness in the sacro-iliac region and over the entire spinal column; sleeplessness; attacks of numbness in the extremities, of a very decided

character, and attended with flexor spasm ; a feeling of pressure at the vertex ; dyspepsia, and meteorism. For the dysmenorrhœa, and resultant convulsive attacks, the subcutaneous injection of morphia proved the only effective remedy. Happily, local and general treatment has very much modified the tendency to such seizures. But for the relief of some of the more constant reflex symptoms, massage has proved a very hopeful agent. Spinal and sacro-iliac pain and tenderness have been very much relieved by its local use, and its regular employment over the whole body three times a week, while not directly inducing sleep, as in the previous case, has seemed to tranquillize the nervous system and render it more susceptible to chloral and other hypnotics ;¹ and the attacks of numbness and flexor spasm have been much diminished in frequency and severity during its use." Applied to the head, massage has had a decided influence in temporarily relieving that sense of fullness at the vertex which is so common and annoying a symptom in uterine disorders. The meteorism in this case has been for several years a persistent and troublesome symptom. I have often seen the abdomen distended to as great a degree as if she were at the close of gestation, tense and tympanitic, and productive of marked dyspnœa and cardiac spasm by the upward pressure. Massage, locally applied, has been more effective in relieving this condition than any other means employed. Repeatedly has its thorough application, extended over a period of fifteen or twenty minutes, been followed by a subsidence of the tympanites and a restoration in good degree of the natural softness of the abdomen, with a corresponding relief of pain. Incidentally, the constipated condition naturally attending such atony of the muscular coat of the intestines has been in a measure corrected by the repeated applications."

Dr. Stoddard remarks, "In these two uterine cases I should have been at my wits' end many times without massage as a remedial agent." Estradire has said,² "Let us know how to make use of massage, if need be, in the cases where the physician has sometimes exhausted his therapeutic means, or, formally yielding to the obsessions of his patients, he is obliged to prescribe or to tolerate it, without, however, compromising his medical knowledge ; but do not let us use it for everything."

CASE V. The only other case of amenorrhœa in which I have known massage to be used was that of a young lady with exophthalmic goitre, whose menses had been absent for seven months. By the advice of her physician she made a six weeks' trial of massage without any benefit resulting except that she was soothed at the time of its application and made to feel more comfortable for the day ; sometimes the immediate effect was a temporary reduction of the very rapid pulse.

¹ I think it is in Estradire's work on massage that it is stated that patients undergoing massage are more susceptible to the effects of medicine in general.

² Page 130.

RECENT PROGRESS IN THE TREATMENT OF CHILDREN'S DISEASES.¹

BY D. H. HAYDEN, M. D.

Salicylic Acid.—W. Wagner² reports that he has employed this remedy with very satisfactory results in fifteen cases of diphtheria, for older children, employed as a gargle; for younger children, who could not gargle, given internally. The gargle used was as follows:—

R̄ Acidī salicylici	1.5	gr. xxiv.
Spiritus vini	1.5	3 ss.
Aquæ destillatæ	150	3 v.
Fiat gargarismus. S. To be used every hour.		

The gargle should be warmed, if crystals become deposited.

For internal use he writes—

R̄ Acidī salicylici	0.15–0.3	gr. iiss.–v.
S. To be taken in water or wine.		

It is always well borne. A portion passes away unchanged with the stools, and the latter become somewhat constipated.

The same remedy has also proved useful in form of salve, or in powder form, applied to wounds and covered with cotton batting; also in cases of atonic ulcers, and especially in obstinate cases of eczema of the face and head. The ointment is prepared by dissolving the acid in double the quantity of alcohol, and mixing with lard in the proportion of one part of acid to ten parts of lard. The same remedy is also useful in affections of the stomach and intestines accompanied by fermentation or decomposition of their contents.

Dr. Fontheim³ reports the results of thirty-one cases of diphtheria treated with salicylic acid. No case terminated fatally. The duration of the severest cases was eight days. None of the cases were complicated with inflammation of the kidneys. In one case there was paralysis of the soft palate. In the severe cases Dr. Fontheim removed the diphtheritic membrane by means of a sponge soaked in the solution; and in addition gave every hour a teaspoonful of the solution internally. Salicylic acid passes very rapidly into the urine. Its presence is detected by the violet-blue reaction on the addition of chloride of iron. The solution used by him is—

R̄ Acidī salicylici	2.0	3 ss.
Aquæ destillatæ	200.0	3 vj.
Spiritus vini		q. s. M.

Dr. Hanow,⁴ in six cases of diphtheria treated with salicylic acid, claims to have obtained “wonderful results.” According to his experience, after the third or fourth dose the membrane begins to be cast

¹ Concluded from page 133.
² Allgemeine medicinische Central-Zeitung, No. 14, 1875.
³ Memorabilien, xii., 1874.
⁴ Berliner klinische Wochenschrift, No. 20, 1875.

off, and so rapidly that masses are vomited up. For adults he uses a solution in the proportion of about one grain and a half of the acid (with sixteen grains of phosphate of soda to increase the solubility) to the ounce of distilled water; for children the solution is made proportionally weaker. He gives from a teaspoonful to a tablespoonful every hour, to be slowly swallowed.

Theod. Schüler (Cüstim)¹ reports the results of treatment in seventy-nine cases of diphtheria, employing in forty-one cases chlorate of potash, in twenty-three cases carbolic acid, and in fifteen cases salicylic acid. In addition to these internal remedies, all the patients were subjected to an energetic treatment with cold-water baths. Of the forty-one cases treated with chlorate of potash, six died. One only of the twenty-three cases treated with carbolic acid proved fatal. Of the twenty-three cases treated with salicylic acid, seven were fatal. The ages of the patients in the six fatal cases treated with chlorate of potash were respectively one, three, four, six, seven, and fourteen years; in each the larynx was affected. In three of the cases treated with chlorate of potash that recovered, the disease had extended into the larynx. The one fatal case treated with carbolic acid was that of a child four years old, and the disease invaded the larynx; eight days previously the patient had been taking chlorate of potash, and the administration of carbolic acid had been begun only two days before death. In three of the twenty-three cases treated with carbolic acid the larynx was affected. The ages of the patients in the seven fatal cases treated with salicylic acid were respectively eleven months, three, four, five, five, six, and seven years. In all these cases the larynx was affected. In one of the cases that recovered the epiglottis was affected; in the others the disease was limited to the tonsils and soft palate.

The salicylic acid was employed exactly according to the method given by Wagner and Fontheim; yet the results differed materially from theirs, not only with respect to the great mortality but also as to the duration of the disease. Four fatal cases, where the larynx was affected, ran their course in three days; three others terminated fatally after a duration of three weeks; four mild cases lasted six to eight days; the remaining had a duration of from three to four weeks.

Whereas Fontheim, in none of his cases, all of which recovered, had inflammation of the kidneys (the absence of which he attributes to the use of salicylic acid), this complication was observed in one of the above fatal cases.

According to the author's experience, therefore, salicylic acid at least works no better than chlorate of potash or carbolic acid; and carbolic acid in his hands has proved the most successful remedy of the three.

Diagnosis of Enlarged Bronchial Glands in Children. — Dr. Eustace

¹ Berliner klinische Wochenschrift, No. 40, 1875.

Smith¹ observes that enlargement of the bronchial glands is a very common lesion in early life. "The seat of the enlarged glands is at the bifurcation of the trachea, and therefore behind the first bone of the sternum, and a little below it. They give rise to dullness on percussion at this spot, and the dullness often extends to each side of the bone, and also downwards to the upper part of the second bone. In the case of young children there is sometimes in health a little dullness in percussing the upper bone of the sternum, produced by the underlying thymus gland; but the dullness does not in such cases reach laterally beyond the limits of the manubrium. In the case of great enlargement of the bronchial glands there may be dullness also behind in the intra-scapular region; but this is rare, on account of the thickness of lung which intervenes between the glands and the posterior wall of the thorax.

"The symptoms by which enlargement of the bronchial glands can be distinguished, namely, distention of the cervical veins, swelling of the neck, dyspnœa, spasmodic cough, and whispering voice, are all pressure signs, due to the encroachment of the swollen body upon the parts around. They are, therefore, not present until the increase in size of the glands has become considerable. In these cases the dullness on percussion is usually marked, and if the glands are of sufficient size to compress the trunks of the large vessels the ordinary stethoscopic signs of such pressure will be heard. At this stage the nature of the case is obvious; but at an earlier period, and before the enlargement has become sufficiently great to give rise to the signs enumerated above, the diagnosis of the lesion is much less easy, as the symptoms by which it is accompanied are few and obscure. At this time much assistance can be gained from the following experiment: If the child be made to bend back the head so that his face become almost horizontal, and the eyes look straight upwards at the ceiling above him, a venous hum, varying in intensity according to the size of the diseased glands, is heard with the stethoscope placed upon the upper bone of the sternum. As the chin is now slowly depressed, the hum becomes less loudly audible, and ceases some time before the head is brought back again into the ordinary position. The explanation of this phenomenon I believe to be that the bending back of the head throws forward the lower end of the trachea, which carries with it the glands lying in its bifurcation; and the left innominate vein, as it passes transversely behind the first bone of the sternum, is pressed between the enlarged glands and the bone. In cases where this sign has been present there has often been some slight dullness over the manubrium, leading one to suspect the existence of enlargement of the glands; and the occurrence of the hum thus produced I now always consider to be evidence confirmatory of the suspicion. The experiment does not succeed in cases of flat chest, where

¹ The Lancet, August 14, 1875.

there is no reason to suspect glandular enlargement; nor can the hum be produced by the thymus gland in a healthy child. This gland lies immediately behind the sternum, in front of the great vessels; enlarged bronchial glands lie behind the vessels in the bifurcation of the trachea. A swelling in front of the vessels does not appear to set up pressure upon the vein when the head is bent back in the position described. I have examined many children with a view to test this point, and in no case have I found the characteristic hum produced except in cases where there was reason, from other symptoms, to suspect the presence of bronchial glandular enlargement."

Enuresis. — At a meeting of the Vienna section of the Medical Society of Lower Austria, held November 10, 1875, Dr. R. Ultzmann made remarks upon the treatment of enuresis in children.¹ Inability to hold the water is not a rare occurrence in children. Boys are observed more frequently than girls with this affection, for the reason that the latter are more apt to conceal the fact. At first, owing to the weakness of the sphincter muscles, the discharge of feces and of urine occurs without the experience of any sensation on the part of the infant. It is only after the tenth or twelfth month that any sensation accompanies the act; and we cannot properly speak of enuresis in a child under two years of age.

Urinary calculus is a frequent affection of childhood, and, as is well known, has its origin in the uric acid infarctus of new-born children, the small renal calculus descending into the bladder and there becoming the nucleus of a vesical calculus. This lithiasis, as well as cystitis, purulent pyelitis, polypoid growths, etc., can coexist with incontinence of urine; so that in these cases the urine should always be examined, in order, before making a diagnosis of enuresis, to exclude these other affections.

The disease in question can be divided into enuresis diurna and enuresis nocturna; and if it manifests itself day and night Ultzmann calls it enuresis continua. It can make its appearance regularly or periodically. It is not confined, as asserted by some, to the scrofulous, rachitic, or to those affected by worms, etc., but is often found in children of healthy robust constitutions. Sleeping too soundly has been assigned as a cause; but only healthy children sleep long and continuously. Trousseau speaks of a too violent contraction of the neck of the bladder, others of a hyperaesthesia of the mucous membrane of the bladder.

According to Dr. Ultzmann's views, the cause is to be found in an absence of the proper relation between the detrusor and the sphincter muscles; the latter is weakened, and consequently the former's action preponderates. At night, when volition ceases to exercise any control, this affection, when there exists a predisposition to it, manifests itself.

¹ Allgemeine Wiener medicinische Zeitung; Allgemeine medicinische Central-Zeitung, November 24, 1875.

The treatment recommended is based upon this theory, and consists in measures to strengthen the sphincter muscle. The remedy employed, which is not claimed to be new, is the induced current, the method of its employment being a modified one. It was formerly the custom to apply one pole through the urethra to the prostatic portion, which is a very difficult proceeding with infants, owing to the narrowness of the urethra. This operation, however, is not always free from danger, and is, moreover, liable to cause urethritis or cystitis. The urine often becomes decomposed, and the patient is consequently made worse.

During the last two years Dr. Ultzmann has been in the habit of applying the induced current indirectly to the neck of the bladder by placing in the rectum or vagina a thin rod of brass, the end of which is connected with one pole, while the other pole is applied to the pubes or thigh. Each application lasts from five to ten minutes, and is made daily. The duration of treatment extends from four to six weeks.

Of nine cases thus treated (five girls and four boys) there was a decided improvement in all. The enuresis continua became in a short time a nocturnal one, and the enuresis diurna a periodical one. Four cases were completely cured. In four cases there was a relapse, but on resuming treatment recovery always followed. Of the nine reported cases three were brothers, respectively five, six, and eight years old. These three were much improved by the treatment.

The same treatment has proved very beneficial also in adults, especially in women when the incontinence has followed severe confinements, two such cases having come under treatment.

The good result of this treatment is explained anatomically by the fact that the nerves of the rectum are the hæmorrhoidæ medius et inferior, which come from the plexus pudendalis and sacro-coccygeus. These nerves supply also the bladder, and consequently the muscular contractility of the latter is thus excited.

Dr. Fleischmann remarked that he had experienced equally extraordinary results with this treatment in the case of a half-idiot boy who had a continual incontinence of both urine and feces day and night. He recommended, however, that in the case of girls the metal rod be always introduced into the rectum, and not into the vagina, as there was no urgent necessity of placing it in the latter. With regard to internal treatment, he had seen excellent results from the use of belladonna. After the patient had taken from five to six grammes (four to five scruples) complete recovery had taken place, and no relapses. When, therefore, success did not follow the use of electricity, he recommended a trial of belladonna or strychnine.

Dr. Winternitz had observed a disappearance of this disease take place coincidently with an outbreak of eczema on the nates, and in addition recommended cold-water irrigation by means of Atzberg's apparatus.

Fæcal Residue of Milk-Digestion. — Hans Wegscheider reports¹ a series of experiments made in the laboratory of Hoppe-Seyler for the purpose of studying the end-products of digestion as found in the fæces of infants that have been brought up exclusively on breast-milk, the ingesta being thus perfectly known.

The results arrived at were as follows : —

(1.) The albuminous material of the mother's milk is entirely absorbed.

(2.) The so-called milk detritus is not undigested casein, but principally fat, and very probably remnants of intestinal epithelium.

(3.) The fat is not all absorbed, as is the case with the albumen ; but a portion leaves the intestinal canal as soap, another as free fatty acids, and perhaps a portion as unchanged fat. It is very remarkable that, where the infant's exclusive food is the mother's milk, and the fat consequently present only in small quantity, and finely suspended in a form to be absorbed most easily, instead of an infinitely small amount we should find in the fæces a goodly determinable proportion of fat.

(4.) In the first few weeks of infant life the formation of biliary coloring matter is constantly and distinctly to be found ; later it is complete. In mild intestinal troubles the biliverdin is increased, probably owing to the increased acidity of the intestinal contents.

(5.) The relative proportion of cholesterine is the same as in the adult and fœtus.

(6.) Of the ferments of the intestinal canal the diastatic was present in small quantity, that of the pancreas only in traces. Pepsine was entirely absent.

Professor Demme² attributes as a frequent cause of diarrhœa in very young infants brought up exclusively at the breast the condition of the mother's milk. In several such cases an analysis by himself showed the reaction to be faintly acid ; there was an abnormally large amount of fat ; and colostrum-corpuscles were observed two to three weeks after the birth of the child.

At the autopsy of four children a few weeks old, who had died of entero-catarrh, all at the breast, there were found but very slight changes in the stomach ; in the small intestines, on the contrary, and in the beginning of the large intestines, the mucous membrane was in a high degree swollen ; and in certain parts of the small intestines there was an enlargement of the follicles. There was found also mixed with the intestinal contents a large quantity of dirty-colored, swollen epithelium, filled with a granular detritus.

The remedy for such diarrhœas lies in furnishing a proper substitute for the mother's milk. All substances containing starch must be forbidden ; also Liebig's and Nestle's food, inasmuch as at this early age the

¹ Inaugural Dissertation. Deutsches Zeitschrift für praktische Medicin, No. 44, 1875.

² Twelfth Annual Report of the Children's Hospital in Berne. 1875.

naturally imperfect powers of digestion are still further reduced by the intestinal troubles and the accompanying disturbance in the functions of the pancreas and parotid glands.

The author recommends as a food for such cases the white of one egg (or less) in from five to ten ounces of water, previously boiled, with the addition of condensed milk (three to five drachms) for the twenty-four hours. The quantity can be gradually increased up to the end of the fourth week, when two to three times the above amount may be given. The milk of other animals or cream should never be used, owing to their richness in fat. The use of metallic astringents in these cases is objected to.

For children from one and a half to two years old, and in perfect health, a thoroughly prepared pap made with flour is recommended to be given once or twice daily. With weakly and delicate children at this age Liebig's or Nestle's food is preferable. For preparation of pap biscuits should not be used, owing to the butter contained in them.

VISION: ITS OPTICAL DEFECTS.¹

THIS book is divided into three parts. The first contains a brief account of the theory of light, and the elementary laws of reflection and refraction. The second treats of physiological optics, and includes illustrations of various patterns of spectacles. The third describes the errors of refraction and defects of accommodation of the eye, and the methods of correcting them. The whole is written in popular form, with quotations from Donders and others interspersed. It cannot be said to fill any very important gap in medical literature.

O. F. W.

CLINICAL STUDIES OF PHTHISIS.²

THIS book contains an analysis, in the author's lucid style, of the notes which he had made in several hundred cases in hospital and private practice.

Among other conclusions which he arrived at from the study of these cases we find that *occupation* has an agency in the aetiology of phthisis, in so far as it is sedentary and involves confinement within doors. Phthisis is rarely preceded by pleurisy or acute lobar pneumonia. There is no evidence that bronchitis has a causative influence in the development of phthisis. The existence of perineal fistula is rather favorable in a case of consumption, and non-interference is advised. A family predisposition to phthisis does not weigh heavily against the probability of either recovery, arrest, or slowness of progress. Life is prolonged by the use of cod-liver oil. These are only a very few of the topics touched upon, and we commend the book to the perusal of all interested in the study of this disease.

¹ *Vision: Its Optical Defects, and the Adaptation of Spectacles.* By C. S. FENNER, M. D. Philadelphia: Lindsay and Blakiston. 1875.

² *Phthisis: A Series of Clinical Studies.* By AUSTIN FLINT, M. D. Philadelphia: H. C. Lea. 1875.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

JAMES R. CHADWICK, M. D., SECRETARY.

DECEMBER 18, 1875. The President, DR. H. W. WILLIAMS, in the chair.

A New Method of Resuscitation in Suspended Animation, with Apparatus.—The paper, read by DR. A. YOUNG, is reserved for publication.

A Specimen of Sarcoma of the Uterus was presented by DR. J. R. CHADWICK. It was taken from a patient whom he had seen in consultation with Dr. I. F. Galloupe, of Lynn, in July last. She was sixty years of age, had been in feeble health for a year, and for several months had been complaining of soreness and intermittent lancinating pains in the uterine region. She had had a slight, but constant, loss of blood for four months, and a profuse hæmorrhage on two occasions. She was feeble, but not emaciated or cachectic. The abdominal examination revealed nothing abnormal. Per vaginam the uterus was felt to be in extreme retroflexion, from which position it could not be raised, either by the fingers or by the uterine sound. The cervix was of normal size and appearance; the fundus was sensibly enlarged, but so soft and boggy that its contour could not be distinctly defined. The sound showed the cavity to be three inches long; the introduction of the instrument caused a slight flow of blood. The diagnosis lay between sarcoma of the fundus and a general hypertrophy of the mucous membrane lining the uterine cavity. Dilatation of the cervix and removal of the contents of the uterus were recommended as the only means of settling the diagnosis, and as being, in either alternative, the proper treatment. This proposition being assented to, tents were immediately introduced, and on the following day the mucous membrane of the uterine cavity was felt to be thickened and corrugated; it was all removed by scraping with Simon's sharp spoon; the oozing of blood was checked by a tampon soaked in a strong solution of perchloride of iron. The shreds of tissue removed were examined by Dr. Fitz microscopically, with undecisive result. The tissues were very rich in cells, creating a suspicion of sarcoma, but not excluding the possibility of simple hypertrophy. The patient subsequently passed through the hands of many physicians, male and female, regular, irregular, and defective; the constant oozing of blood persisting, she slowly failed, and died November 21st, four months after the operation.

At the autopsy, made by Dr. R. H. Fitz, the body was found to be much emaciated; the thoracic organs were healthy, as were the kidneys and spleen. "The stomach presented the appearances of chronic catarrhal gastritis. The pelvis was filled with a soft solid mass, imbedded in which were the diseased uterus and ovaries.

"The uterus measured five inches in length and three in width; its walls were of normal thickness, friable, of grayish opaque color, and of spotted appearance. The cavity was somewhat enlarged; its surface was of pinkish hue, and entirely composed of soft nodules and shreds of decomposed tissue; there was no trace of the normal mucous membrane. This condition extended to, but did not include, the external os, which was of perfectly healthy aspect. The vagina was free, except for a small patch of infiltration in the vicinity of the

urethra. The rectum and bladder were relatively healthy. Both ovaries were closely adherent to the surrounding parts; one was as large as a small apple, soft, reddish-gray on section, and without the least trace of the normal ovary. The exterior of the uterus and the pelvic cellular tissue were infiltrated with the new formation, so that the pelvis was completely filled. The growth extended along the spine, especially in the glands. The supra-renal capsules were soft, and as large as figs. The liver contained many nodules, some as large as peaches; those near the surface were slightly umbilicated. On section the nodules were somewhat elevated, of yellowish-white color and a very soft consistency. The rest of the liver was healthy.

"The structure of the growth was that of a round-cell sarcoma — abundant round cells, with a delicate fibrous stroma."

Dr. Chadwick referred briefly to the paper in which Virchow¹ first called attention to this form of growth in the uterus, and to the cases subsequently reported by Gusserow,² Hegar,³ Winckel,⁴ Chroback,⁵ Jenks,⁶ Hayden,⁷ and A. Simpson.⁸ He pointed out that sarcoma in the uterus differed from carcinoma in having its site in the fundus of the organ, in being more painful and more likely to be attended with hæmorrhage in the early stages, and in its slower growth. The rate of growth in this instance must be regarded as exceptionally rapid. He had seen one or two other cases of this disease, and believed it to be much less rare than was commonly supposed.

A Specimen of Fibroid Tumor of the Uterus complicated with Peritoneal Sarcoma, from a patient of DR. F. A. HARRIS, was presented by DR. CHADWICK, who had seen the case in consultation. Dr. Harris's account of the case was as follows:—

"The patient had been a widow for twelve years, had never borne children or had a miscarriage. Her complexion had been sallow for nearly three years. She had had a cough, dyspnœa, and cardiac pain for many years, but had kept to her work as a supernumerary at the theatres until six weeks ago. Nearly two years ago, during a severe attack of menorrhagia, to which she was subject, a relative, who was a professional nurse, thought she discovered an abdominal tumor, but did not mention the fact to the patient; the latter had become aware of the tumor within a very few months only, and had suffered no pain or inconvenience from it. Her increasing cough, dyspnœa, and œdema of the lower extremities had compelled her to take to bed about six weeks ago; since that time she had been treated by another physician.

"I first saw the case in company with Dr. J. C. Harris, of Arlington, on December 9, 1876. The patient was extremely prostrated, with a rapid, feeble pulse, a hurried respiration, a wearing cough, and a dry, furred tongue. The

¹ Die Krankhaften Geschwülste, i. 357.

² Archiv für Gynækologie, i. 2.

³ Archiv für Gynækologie, ii. 1.

⁴ Archiv für Gynækologie, iii. 2.

⁵ Archiv für Gynækologie, iv. 3.

⁶ Obstetrical Journal of Great Britain. American Supplement to Vol. I., Nos. 7 and 8, 1873.

⁷ Boston Medical and Surgical Journal, June 18, 1874.

⁸ Edinburgh Medical Journal, January, 1876.

lower extremities were very œdematous, and examination of the abdomen revealed the presence of a large tumor as well as much ascitic fluid.

"I called to my aid Dr. J. R. Chadwick, who, after a careful examination, advised removal of the ascitic fluid, with the view of relieving the dyspnœa, as the stethoscope showed a considerable amount of œdema in the lower portions of both lungs, as well as a very loud souffle with the heart-sounds. The operation was performed, and about four quarts of fluid were removed by the aspirator with the greatest relief to the patient, the pulse coming down from 120 to 94, and the respiration from 40 to 20; she slept quietly during the night with one eighth of a grain of morphine, thus having, as she said, the first sleep she had had in four weeks. The next day her condition was slightly improved, but in the night the dyspnœa became again alarming, and paracentesis abdominis was again performed, on the left side (the previous operation having been on the right), and four quarts more of fluid were removed with great relief.

"The patient, though free from suffering, failed gradually, and died on the morning of December 13th. No exact diagnosis had been attempted under the circumstances, but from the history and condition of the patient, and especially from the anasarca and the very small nodules felt on the surface of the tumor, some form of cancer had been suspected."

DR. FITZ gave the following account of the autopsy, made by him on the next day after death:—

"The body was emaciated. The heart was of normal size and color; its valves and cavities apparently healthy. Lungs free from adhesions; both œdematous; the pleural surface of the left lung, near the root, presented rare, small, soft nodules of new-formation. A circumscribed nodule, the size of a cherry, on the left upper lobe. The abdominal cavity contained about a pint of clear yellow fluid; the peritoneal surface throughout was studded with nodules varying in size from that of a pea to that of a pigeon's egg, of about the consistency of a spleen, and in color reddish-white or red; apparently lying upon the peritoneum, they were evidently just beneath its superficial layers. The omentum was a heavy, nodulated mass, suggestive of clusters of grapes lying in close apposition. The abdominal organs presented no unusual appearance. In the anterior wall of the uterus was a fibro-myoma extending upwards into the abdominal cavity as far as the umbilicus. The uterus was retroverted, its cavity nearly five inches in length and four in width. In the posterior wall, near the cervix, was a hard, white fibro-myoma, of the size of a large plum. The larger tumor was soft, suggesting an indistinct fluctuation. The cut surface was yellow, in parts dotted with orange, and contained occasional small cavities filled with a puriform material. The tissue was extensively fatty degenerated, and very readily broken. The peritoneal surface of the tumor was studded with small sarcomatous nodules. The structure of the peritoneal growth was composed mainly of large cells, stellate, fusiform, long, narrow, and flat, with large and multiple nuclei. The cells were abundantly fatty and granular; the intercellular substance was slight, in part fibrillated, in part more homogeneous, the cells apparently in close apposition. The whiter tumors contained relatively few blood-vessels, while in the red nodules

they were very numerous. The growth presented the characteristics of a medullary sarcoma."

Dr. Chadwick pointed out the interest attaching to the two specimens with reference to the different distribution of the sarcoma; in one instance the dissemination was apparently from the pelvic organs along the lymphatic glands on the spine, and thence throughout the liver, probably following the ramification of the portal vessels. In the other case, the disease was apparently limited to the peritoneum at the outset; the metastatic nodules in the lungs most probably having taken place by the way of embolism.

Limited Responsibility, with a Discussion of the Pomeroy Case. — The paper, read by Dr. C. F. FOLSOM, was published in *The Boston Medical and Surgical Journal* for December 30, 1875.

A Battery for Therapeutic Purposes was shown by Dr. S. G. WEBBER; it was made by Fleming and Talbot, of Philadelphia, and is convenient because it is light (fourteen pounds); it is compact, easily managed, not liable to get out of order, and has a current of sufficient intensity. Thirty cells are so arranged in sets that the elements of only ten need be immersed at once. The current can be increased in strength by single cells or any number of cells. The direction of the current can be reversed at will. The strength of the acid solution given in the directions is greater than is necessary.

A United Fracture in the Radius of a Horse that had been treated by Dr. Henry Barnes, of Marlborough, was exhibited by Dr. H. J. BARNES. The fracture was in the lower third, and had been caused by the kick of another animal. The horse was, after the accident, partially suspended in a swing, the hind feet resting on the floor. Stiff sole-leather was molded to fit the limb, and kept in position by straps over the shoulders. The horse submitted quietly to the treatment, and a very good result had been obtained without swelling or perceptible inflammation, when the animal slipped its halter, reared, and, falling from the sling, again separated the fragments. The limb was put up as before, becoming this time greatly swollen and inflamed; a good recovery, however, was made, without shortening or lameness.

THE EDUCATION OF THE BLIND.

FIFTY years ago there was no public provision in the United States for the education of the blind; now, there are twenty-seven public institutions designed especially for their instruction. The mental and moral condition of the blind in this country has been very greatly improved during this period, and is superior to that of the same class in other Christian countries. Dr. Howe says, in one of his reports: "In England and all over the Continent the blind are still regarded as a class of dependents, and to most people the appearance of a blind person instantly suggests the idea of beggary. The efforts organized in Europe during the present century for the assistance of the blind and the amelioration of their condition have met with considerable success; but any one who passes by the church-yards and through the thronged streets of the larger European cities, is frequently and forcibly reminded of old Bartimeus begging

from the passers-by, cap in hand." A blind man in this country is far from being considered in any such light. Among the graduates of our schools for the blind are to be found not only skillful mechanics, but also able musicians, teachers, and writers. The institution for the blind at South Boston has been chiefly instrumental in raising this unfortunate class to their present condition. The blind of New England particularly are a striking example of what may be accomplished by our system of instruction. The importance of this work may be estimated when we take into account the number of blind in the United States. This does not fall short of twenty-seven thousand, of whom two thousand five hundred are in New England, and one thousand in Massachusetts.

In view, then, of what has been accomplished by the late able director of the South Boston institution, we presume a brief sketch of the history of that charity will not be without interest to our readers.

In 1827 or 1828 several gentlemen in Boston became interested in the matter of educating the blind, through the exertions of Dr. John D. Fisher, and formed themselves into a society. They raised a small sum by subscription to begin a school; aid was soon obtained from the State in the form of an annual grant of money. To these funds were added several munificent endowments, most prominent among which was that of Col. Thomas H. Perkins, whose name has been permanently connected with that of the institution. It is said that Dr. Fisher, in looking about for a suitable person to take charge of the institution, heard of Dr. Howe, then a young man fresh from his exploits in Greece. Dr. Fisher proposed the undertaking to him; Howe without a moment's hesitation exclaimed, "Why, that is just what I should like to do!" The last report, issued in October, 1875, bears the same stamp of ardor which has been characteristic of the man during his entire stewardship. With such a leader it is not surprising that the institution bears a high record.

It is important to remember that the term asylum, although appearing in the title, is a misnomer. The blind are not furnished with a permanent home; it is intended to give them merely a thorough practical education, to enable them to become self-supporting. To this end, a system of instruction and training has been adopted which differs from those used in our public schools only in being adapted to the peculiarities of the class of persons for whose special benefit it is intended. This embraces study in the school-room, accompanied by oral instruction, lessons and practice in vocal and instrumental music, training in tuning and repairing piano-fortes, instruction in some simple trade or domestic occupation, and careful physical training. There is a large library of books in embossed letters of various kinds, printed in this country and in Europe; a circulating library is connected with it, from which the blind from all parts of the country are able to borrow. The printing type first introduced from Europe were found objectionable, and after a series of unsuccessful trials Dr. Howe had glass types cast, which have taken the place of all other kinds. Attempts were made in the sixteenth century to print for the blind in raised letters, and in the *Annual Register* for 1762 it is stated that Mlle. Salignae, a blind lady, received communications from her friends written by pricking the letters on paper with a pin. Until the present century, how-

ever, little progress had been made. About the time the asylum was founded, printing for the blind was introduced into England, having already been used in France for nearly forty years. A great variety of alphabets have been invented. The well-known Braille system, introduced about the year 1839 in Paris, consists in an arrangement of tangible points, and is much used, particularly in Europe. Dr. Howe's alphabet consists in a modification of the lower-case Roman type, and is the principal reading type now in use in all the institutions of the United States. About fifty different works have been printed in this type at South Boston. The printing office is now closed for want of funds; meanwhile the blind are furnished with books by the American Printing House in the Institution for the Blind at Louisville, where a great many valuable improvements in this kind of printing have been made. It will be seen that the blind have quite a wide field of literature open to them for their personal perusal. Many, indeed, attain high literary culture. One pupil has graduated with honor at Harvard, another at the Divinity School, and a third has become Superintendent of the Tennessee Institution for the Blind. In addition to the ordinary trades of chair and mattress making, piano tuning, etc., it is hoped to open a new field by employing the blind in telegraph stations. This seems a very suitable occupation for them.

As it has been found much to the advantage of the blind not to be congregated together, it is thought that the training and teaching of a considerable portion of them will before long devolve upon our common schools. This is at least the idea towards which all recent improvements have been directed. The cottage system has been substituted at South Boston for the old plan of keeping all ages and both sexes in one building, and it has proved vastly superior.

The separation of the sexes Dr. Howe considered of the highest importance, intermarriage between defectives of whatever class being deemed a leading cause of perpetuation of peculiarities of body and character, from the parent to the offspring. He would not, however, advise the blind for this reason to abstain altogether from marriage. The strong recuperative power of nature from any morbid condition might by suitable intermarriage counteract the tendency to reproduce these infirmities in future generations. The cottage system favors social relations with the neighborhood in a way that is not possible when all are congregated under one roof, and is a step towards the separation of the blind from one another and bringing them in contact with the outer world.

We have not mentioned the case of Laura Bridgman, Dr. Howe's greatest triumph. A brief sketch of her history is given in one of his late reports. It was in the early years of his labors that Dr. Howe heard of her, sought her out, then a little girl of five years, in a small New England village, and took her to his own home. Not only deaf, dumb, and blind, she was also nearly devoid of the sense of smell. By means of the sense of touch alone, through years of unceasing care, she has been elevated into a highly educated and refined woman. Oliver Caswell's education was a triumph of a similar character.

It may be mentioned in conclusion that the work of our institution has not

been confined to this country. The Royal Normal College and Academy of Music for the Blind in London, England, is an offspring, established mainly by Mr. F. J. Campbell, who was a teacher at South Boston during eleven years, assisted by a corps of teachers trained here also. The blind of this country will have good reason to look upon the man who organized and directed personally the leading school of the blind for nearly half a century as one of their greatest benefactors.

RAPID CURE OF ACUTE RHEUMATISM WITH SALICYLIC ACID.

THE first number of the *Berliner klinische Wochenschrift* for the new year contains an article on the treatment of polyarthritis rheumatica with salicylic acid, containing such interesting statements, and emanating from so high an authority as Professor Traube, that we hasten to give some account of it to our readers. The cases occurred in Traube's clinic, and are reported by one of his assistants, Dr. Stricker. The latter states that for several months past all the patients affected with acute rheumatism in whom the local symptoms were well marked have been treated with salicylic acid, and that in all cases at the end of forty-eight hours, frequently much sooner, there was not only a return to the normal temperature, but also a complete disappearance of swelling, redness, and particularly of pain in the joints. Dr. Stricker proclaims boldly that the experience which he has obtained in these cases cannot be attributed in any way to chance, and that salicylic acid must therefore, entirely apart from its antipyretic action, be looked upon as having a specific action on acute rheumatism and affording a means of the radical cure of the disease.

It is quite important that a pure pulverized acid should be obtained. When carefully prepared and pure the crystals are very white and glistening needles, without smell, and soluble without cloudiness in water and alcohol. In this form it can be given in large doses without disturbing the digestion. It is administered in a wafer, to protect the mucous membrane of the mouth and pharynx from dryness and burning, which sometimes follow contact with the crystals. The dose is from one half a gramme to a gramme, or seven and one half to fifteen grains, and is given every hour until the diseased joints can be moved without pain. To effect this it may be necessary to administer as much as fifteen grammes, never less than five grammes. This treatment produces increased perspiration, tinnitus aurium, and deafness, and rarely some mental exhilaration, symptoms which hardly contraindicate its use. The treatment should be begun early in the morning, and is occasionally complete before night. In one case an enthusiastic patient took, without leave, twenty-two grammes in the space of twelve hours without the slightest gastric disturbance. Meanwhile the tongue, which was heavily coated, had cleaned up, and the lost appetite returned. The effect of the drug upon the secondary inflammations, particularly those of the pericardium, have not yet been sufficiently studied, the material for that purpose not having been adequate. The whole number of cases thus treated is but fourteen; the effects of the treatment are so uniform, however, that the profession is strongly urged to try it. This method

has, we believe, also been carried out by another Berlin physician with success. The first of Stricker's cases only is given in the number of the journal to which we have referred; the account of the others will follow. In this case there was considerable elevation of temperature, while several phalangeal joints of the left foot, the left knee, the shoulder, and the wrist were slightly reddened, swollen, and exceedingly painful. The patient had been sick several days; treatment was begun in the evening, and by the following afternoon all the joints were well, while his appetite had returned with great vigor.

Although the data are far from sufficient to establish the claim made for the drug in the treatment of the disease in question, the name of Professor Traube furnishes an indorsement to the facts which does not permit them to be treated lightly. We shall await with much interest the report of other cases and the results of a general trial of the remedy, which will be sure to follow this somewhat startling announcement. In the mean time it would be well, keeping in mind the experience with regard to the "Löstorfer corpuscles," not to let our expectations be raised too high.

MEDICAL NOTES.

— The Transactions of the Medical Society of New Jersey for 1875 have recently appeared. This is one of the oldest medical societies in this country, having been established in the year 1766. A species of centennial supplement accompanies the report of the present year, being an abstract of the proceedings of the society from its foundation to the year 1800. In the proceedings dated November 6, 1787, we notice the following: "On motion, resolved that the president be requested to write to the President of the Medical Society of the State of Massachusetts Bay and acquaint him with the rise, progress, and present state of the New Jersey Medical Society, and to solicit a similar communication from him relative to that society, and also to propose a correspondence between the societies; and that the president be further requested to lay a copy of his letter and answer thereto (if he should receive any) before the society at the next stated meeting." At the meeting of May 6, 1788, "the president informed the society that agreeably to their request, at the last meeting, he had written to Doctor James Lloyd, of Boston, supposing him to be the President of the Massachusetts Medical Society, on the subject proposed, and had received an answer, together with a copy of the charter of incorporation of the said society, which were laid before the society and read.

"Ordered, that the copy of the charter of incorporation of the Massachusetts Medical Society be preserved among the archives of this society."

We trust that in this centennial year the old friendship so auspiciously begun one hundred years ago will not be forgotten.

— Medicated ice is recommended by Dr. Edward Martin in *The Lancet* of January 8, 1876, as of use in the sore throat of scarlatina and other diseases. Young children cannot gargle, and to attempt to apply the brush or spray to the throat often fills them with terror. Yet these little ones will usually suck bits of ice greedily. Dr. Martin has of late been trying with them an ice

formed of a frozen solution of sulphurous acid or other antiseptic. Though not so tasteless as pure ice, the flavor is so much lessened by the low temperature that the little patients generally take the medicated ice readily. To prepare it, a large test-tube is immersed in a mixture of pounded ice and salt, and in the tube the solution is readily frozen. When quite solid, a momentary dip of the tube in hot water enables one to turn out the cylinder of ice. Three formulæ are given, to the first of which Dr. Martin is most favorable: (1.) Sulphurous acid, half a drachm; water, seven drachms and a half: mix and freeze. (2.) Chlorate of potash, one scruple; water, one ounce: dissolve and freeze. (3.) Solution of chlorinated soda, half a drachm; water, one ounce: mix and freeze. Boracic acid, salicylic acid, or any other harmless antiseptic with not too much taste would doubtless also be useful.

— Italian and German journals give an account of an epidemic which has been observed in the vicinity of Rome, and of which the origin is rather curious. A large number of people were affected with gastro-intestinal irritation, characterized by diarrhœa, vomiting, intense thirst, and a marked diminution in temperature and in the frequency of the pulse. After considerable research, physicians began to suspect the goats' milk, which is in general use with the people. The animals were examined by the veterinary surgeon and pronounced to be healthy. The milk of the animals and the dejections of the patients were analyzed. Not any traces of metallic poisons could be found. Suspicious then fastened themselves upon the pasture ground of the goats, and there were found four plants more or less poisonous: *Olemtis vitalba*, *Conium maculatum*, *Colchicum autumnale*, and *Plumbago Europæa*. The vomitus and the milk, when analyzed anew, presented the peculiar chemical reactions for colchicine.

— Dr. Jules Boeckel, of Strasbourg, has reported to the medical society of that city the case of a patient who entered the hospital complaining of severe pains in the lower part of the abdomen. Purgatives failing to give relief, and the pains becoming more severe, the patient told the attendant that five or six days before, one of her friends, taking advantage of her drunken condition, had introduced into the patient's rectum a number of snails. On exploration fifty-two snails were speedily removed, and by means of injections of oil the number was increased to seventy. The mollusks, though dead, appeared not to have undergone any maceration or digestion.

— The *Lyon Médical* for December 19, 1875, calls attention to the report upon the illegal practice of medicine presented to the Association of the Physicians of the Gironde by the committee of professional defense. This report, made by M. Rousseau Saint-Philippe, is described as a veritable work of art, of extreme delicacy, and good taste. It seems that in times past the Association of the Physicians of the Gironde have attempted to repress the practice of empirics, and in 1861 active measures were taken in this direction. The authorities, however, contented themselves with condemning one individual, and then ceased from further prosecutions. For twelve succeeding years the association awaited a revision of the laws regarding the illegal practice of medicine, and during this time charlatans continued to practice under the paternal eye of those charged with enforcing the laws. At length, however, tired with waiting,

the association, at its session on March 24, 1875, appointed a committee of professional defense to coöperate with the state authorities against the enemies of legitimate medicine. Soon after its appointment the committee, composed of eighteen members, had a long and painstaking session. Assurance was given of the favorable disposition of the public authorities, and that the plans of the committee should be received and listened to by them. It was decided to appoint from the committee a permanent sub-commission, to have charge of the details of the work, and to summon the entire commission when important questions demanded it. The sub-commission pursued its work with activity, and yet much circumspection and prudence were needed. A catalogue of all the facts connected with the illegal practice of medicine was made, accounts of the persons engaged in it, their fees, etc. When the lists were prepared they were placed in the hands of the attorney of the republic. The offenders were classified under one of six divisions.

In accomplishing so much as has been related, the committee reported that they felt they had made real progress. Better results might be expected in the future. Already the moral effect was considerable. A salutary agitation had been created, alarm had been given to the local powers of justice, a holy fear — the beginning of wisdom — had been inspired among the charlatans, and, in fine, full satisfaction had been given to one of the most pressing demands of the medical profession.

In view of this report the *Lyon Médical* recommends that a similar commission be instituted by the association of the physicians of the Rhone.

LETTER FROM TENNESSEE.

MESSRS. EDITORS, — There is frequent inquiry in regard to the climate of this region, and the advantages of this section as a health resort. Many complain of the rigor of Northern winters, and ask if some point cannot be found in the South where it is not excessively hot in summer and at the same time free from fatal diseases. East Tennessee is so far from the Gulf coast and Mississippi bottoms that there is freedom from excessive heat and malarious influences. It is about one thousand feet above the sea-level, and is inclosed by mountains much higher, so that its summer heat is never oppressive, and as it is situated between the thirty-sixth and thirty-eighth parallels of latitude its winters cannot be very cold. The streams are rapid, and no alluvial flats exist to originate malaria. Acute thoracic affections often occur in the cooler months, but consumption cannot be considered common. Indeed, tubercular phthisis is rather rarely met with among the native white population. There are very many people now resident in this region who came from the North to escape threatening lung affections, and are in good health. Asthma is almost invariably relieved upon the sufferer's arrival, and generally cured after a short residence. There are many evidences of this fact to be met with in and about Knoxville. Nasal catarrh is also much relieved, if not cured, after a short time; many persons have come here from the Atlantic coast and the Lake region with satis-

factory results. Persons who have long suffered from malarial diseases are generally much improved in health after a few weeks or months.

Diarrhoeal affections among children are not prevalent during the hot months; most cases met with occur in May or June, and are caused by derangements of the *primæ viæ*. August and September are often our healthiest months among all ages.

Dr. Van Bibber, in his paper read at the last meeting of the American Public Health Association, says, "There are three localities where consumptives may go: (1.) On the Cumberland Mountains. (2.) Western North Carolina, South Carolina, and Georgia, of which Asheville and Aiken are the centres. (3.) North Florida." East Tennessee, it will be seen, lies about midway between the first and second of these localities. The following division of the year is suggested to invalids in regard to these three localities. The hottest months may be spent in the mountain regions, either east or west of East Tennessee. The spring and autumn months are always pleasant in or near Knoxville. The cold winter months may be spent in Florida. The happiest mean of temperature is found between the Cumberland and Unaka ranges of mountains, embracing an extent of from fifty to eighty miles. Facilities for change of residence are abundant.

So far as it is important that consumptives should go where they can spend much of their time in the open air, that requisite can be carried out anywhere in this mild and elevated region. In Knoxville there are but few days in the year when an invalid cannot be out-of-doors without suffering from either heat or cold. Heavy rains alone will keep him in the house.

There have been four fatal cases of pseudo-membranous croup during the year past among white children. In one case tracheotomy was performed. Two were in the same family, within two days. Another occurred earlier in the year, in a house nearly opposite on the same street. This disease is considered of rare occurrence in this city, but ordinary laryngeal croup is common. Tracheotomy was resorted to in the case of a little girl six years old, and proved successful. Dr. Boyd, the operator in this case, informs me that he had performed this operation successfully in six cases at previous times; two were those of adults, the purpose of the operation being to facilitate the removal of morbid growths from the larynx.

During the last autumn there were sixty-three cases of measles among the inmates of the state deaf and dumb asylum located in Knoxville. The first case was that of a boy from a distant county, who was attacked a few days after his arrival. By a strict observance of non-intercourse with the inhabitants, no case occurred outside the asylum buildings. All the patients recovered without any unfavorable sequences, which was attributed by the attending physician to close watching for at least three weeks and confinement to the sick quarters.

The number of deaf mutes is about one hundred and twenty. In 1872 or 1873 there were some cases of severe typhoid fever among the inmates, four of which proved fatal. It was probably induced by foul air from an excavation made for the purpose of erecting an additional building on ground upon which refuse water and kitchen slops had been poured for many years.

The Knox County section of the East Tennessee Medical Society holds weekly meetings, and the average attendance is more than half the whole membership. The younger members of the profession take an unusual interest in the meetings.

There is one lady practitioner in the city, a graduate of a Philadelphia school. During the last summer, in a case of labor she was attending, laceration of the perinæum occurred. She at once proceeded to remedy the accident by an operation which is said to have been successful. Whether the laceration was a result of her want of skill or no, she is entitled to the credit of attempting an operation which her male *confrères* are not all able or ready to take in hand.

As a result of my own observations, as well as those of others, I have found amenorrhœa to be of comparatively rare occurrence in this region, while the reverse is very common, both in single and in married women. Girls generally menstruate at an early age (many at twelve), and the influence of habit and climate tends to a relaxation of fibre unknown in Northern latitudes. A recurrence of menstruation during lactation is quite common, and so much so among colored females that if they are not "regular" within eight weeks, they will call for medical advice. There is a tendency to laxity of mucous surfaces, probably from the influence of long warm seasons. Pulmonary hæmorrhage is often met with in persons who give no history of lung disease, and show no conclusive signs of organic lesion.

An interesting series of cases illustrating family insanity has lately come to our notice in the city. In midsummer a man about thirty-two years old shot himself; he had for some time shown signs of mental aberration. During the autumn a younger brother began to show signs of melancholy, and threatened suicide. He had been employed as clerk in the office of the pension agent, and in a few days after quitting work drowned himself in the river. These brothers were both married, but unhappily. In December a third brother, single, but of eccentric habits, also a clerk in the same office, began to talk of self-destruction, and by timely interference was taken to the state asylum. The father of these men was for years before his death a Methodist preacher, but was considered partially insane. A surviving sister is at present insane.

Our city physician has given me some items of his annual report. The total of deaths in the city and suburbs (embracing a total population of over eleven thousand) is two hundred and thirty-two, sixty-two suburban. Besides, there were fifteen still-births. In the city there were eighty-six whites and eighty-four blacks; this, according to population, gives a death-rate among whites of about sixteen in the thousand, and among blacks thirty-three. From zymotic diseases there were fifty-nine deaths. From miasmatic diseases there were thirteen deaths of negroes, and four of whites. Croup caused the death of four whites and one negro; diarrhœa, of one white person and six blacks; cholera morbus and cholera infantum, eleven whites and three blacks; consumption, thirteen whites and fourteen blacks. Quite a proportion of the whites that died of consumption were those who had come here from other localities too late to be benefited by a climatic change. Pneumonia caused twenty-five deaths. Many of those reported as dying from consumption were doubtless cases of chronic

pneumonia, and not of tuberculosis. Many blacks die from what is known in the South as "nigger consumption," which is more strictly a rapid disintegration of lung-tissue following pneumonia, and involving the lower lobes rather than the upper.

F. K. BAILEY, M. D.

KNOXVILLE, TENN., January 15, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JAN. 29, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	531	26
Philadelphia	800,000	353	23
Brooklyn	500,000	236	24
Boston	342,000	198	30
Providence	100,700	27	14
Worcester	50,000	10	11
Lowell	50,000	17	18
Cambridge	48,000	23	25
Fall River	45,000	19	22
Lawrence	35,000	5	7
Lynn	33,000		
Springfield	31,000	15	24
Salem	26,000	11	22

Normal Death-Rate, 17 per 1000.

BOOKS AND PAMPHLETS RECEIVED. — Twentieth Annual Report upon the Births, Marriages, and Deaths in the City of Providence, for the Year 1874. By Edwin M. Snow, M. D.

Twentieth Annual Report of the Trustees of the State Lunatic Hospital at Northampton. Sanitary and Medical Reports for 1873 and 1874, by Officers of the United States Navy. Washington: Government Printing Office. 1875.

WE understand that official information has been received from Philadelphia that the number of delegates from each state society to the International Medical Congress should correspond with that of the *Representatives* to Congress from that State.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XCIV.—THURSDAY, FEBRUARY 17, 1876.—NO. 7.

ANALYSIS OF FIVE THOUSAND CASES OF SKIN DISEASE.¹

BY JAMES C. WHITE, M. D.,
Professor of Dermatology in Harvard University.

SECOND PAPER.

As stated in the beginning, the affections enumerated in the tables there given may be more particularly considered to best advantage by the groups or classes into which they naturally fall by mutual relationship. Just what is the most natural or practical system of dividing or arranging skin diseases it is not the purpose of this paper to discuss. I have adopted that of Professor Hebra (Table II.), not that I think it perfect, for it might be made simpler by reducing the number of its classes, but because I think it is on the whole by far the best, and the best known.

Class I., *Hypercæmias*, and Class II., *Anæmias*, for instance, might seem to be useless in a system of classification, because of five thousand consecutive cases of disease not one is referred to them, while hyperæmia is one of the most constant and important phenomena of a large proportion of them. It is, however, because it is a symptom merely, and one in a chain of tissue-changes, that its occurrence in them does not suffice to characterize and enroll them in the class of which it is the sole and essential type. The hyperæmic affections belonging properly to Class I. are mainly the fugitive congestions of the skin, like the erythemas and roseolas accompanying the exanthemata, and following contact with the milder irritants (rubefacients), which are so trivial and fleeting in their course that they do not present themselves at dispensaries for treatment. The anæmias of the skin (Class II.) are almost wholly symptomatic of general conditions of disease, and can scarcely be considered as independent cutaneous affections.

Class III. *Affections of the Cutaneous Glands* (91 cases). It is largely in connection with the diseases placed in this group that the remark made in the beginning concerning the differences in character of the affections occurring in private and in dispensary practice holds true, especially if we were to consider with them those which might be held

¹ Continued from page 89.

to be merely their advanced stages. The cause of such difference is of easy explanation. The disorders of the glands, both functional and structural, seldom give rise to subjective symptoms of a distressing character, or in any way affect the general condition or life of the patient, although they are most frequent sources of disfigurement. They are, therefore, largely neglected by those classes of society which care little for troubles which do not interfere with their grosser ideas of comfort, while on the other hand they are so annoying to those who prize beauty and cleanliness as essentials of living, that they are often considered as of more importance than other really serious derangements of the system. Affecting apparently all classes alike, the number of patients seeking relief from them among the refined and wealthy is therefore vastly in excess of the proportion they bear in these tables, which mainly represent the other class. We see, for instance, that seborrhœa occurs but fifty-five times, and forms only about one per cent. of all cases, whereas in two thousand consecutive cases tabulated from my private record-books it occurs more than two hundred times, or ten per cent. of all cases.

Of the affections of these baceous glands, the most common, as will be seen, are those embraced under this term seborrhœa, which according to Hebra's definition, too abundant flow of sebum, includes a great variety of forms, according to seat and changes in the character of the secretion. A few of the cases were of the oleosa type and of the face, affecting the nose and forehead, giving to these parts the greasy look, and accompanied in a small proportion by the reddened and congested condition of the cutaneous tissues, called seborrhœa congestiva. The larger part of them, however, in the proportion of three to one, were seated upon the scalp, and were either of the dry (*sicca*) type, characterized by white branny scales, or of the moist (*oleosa*) kind, marked by collections of greasy matter. This affection, commonly called dandruff or pityriasis, and often regarded as a disease of the epidermis, is really but a modified secretion of sebum, the cells of the glands failing to undergo their normal fatty degeneration and conversion into fluid oil within the glands, and escaping either in the form of dry and silvery, or greasy and adherent epithelial cells upon the general surface of the scalp. In addition to the discomfort and disfigurement it causes, it is of great importance in its relations to alopecia and eczema of the scalp. Of the former, the alopecia furfuracea of Hebra and Kohn,¹ it is the earliest stage, the change in the formation of the epithelial cells of the gland extending gradually to the corresponding cells of the annexed hair follicle, and thus preventing the development of healthy and long-lived hairs. It is by far the most frequent cause of early baldness, and rarely comes

¹ See the *JOURNAL* of June 8, 1871, for an excellent description of this affection by Kohn

under treatment until its real importance is impressed upon the patient by the loss of hair. Its great frequency may be estimated by the large percentage it forms of the cases in private practice above given, for although a small proportion of the two hundred there enumerated were undoubtedly seborrhœa of the face alone, yet if to these had been added the very numerous cases recorded simply as alopecia, but which are really the later stages of this affection, it would show a still higher preponderance.

Of eczema, too, seborrhœa of the scalp is a very frequent cause, both in adult life and in childhood. The constant attempts of the patient to remove the offensive collections by such rough means as fine-toothed combs, stiff brushes, irritating hair-washes, and the like, together with the heat, itching, and scratching provoked by the presence of the scales, lead sooner or later to congestion of the skin, and in turn to chronic infiltrated eczema, or moist and acute eczematous inflammation, not only of the scalp but of the neighboring parts also. The very common form of infantile eczema caused by the collection of the sebum upon the scalp can hardly be referred to this class, for in the majority of cases there is no seborrhœa present, and the formations are merely accumulations of normal sebum and dirt, in consequence of ignorance on the part of the mothers and nurses as to the importance and proper means of its removal.

That but three cases of so common an occurrence as comedones are recorded in this class is explained by the statement that only those were recorded as such in which they formed the sole affection of the sebaceous glands, and which were so abundant as of themselves to lead the patient to seek relief. Associated with acne, however, they occurred in a large majority of cases, and as an important factor in the ætiology of that disease. The same may be said of milium, so far as the individuality of the cases mentioned is concerned, but it was not infrequently seen in connection with, although forming no part of, other cutaneous diseases.

Molluscum contagiosum was observed nine times. The position of this mysterious affection in this class may, in the light of recent investigations into its anatomy, be looked upon doubtfully. Reference to the last semi-annual report on dermatology in the *JOURNAL*,¹ will show that good grounds exist for the opinion that the peculiar cells which form the structure of these tumors are modifications and growths of the rete mucosum, and not of the sebaceous glands.² This change of seat, however, even if accepted as a fact, would throw no additional light into the obscurity surrounding the nature of the disease. The cases yielded no positive evidence of its contagious character, as in every instance the

¹ December 2, 1875.

² See paper by Dr. Cäsar Boeck, *Vierteljahresschrift für Dermatologie und Syphilis*, ii. Jahrgang, i. Heft.

patient was the only member of the family affected. One case was that of a nursing mother with a numerous crop upon the left breast. Five of the patients were young children, and four of this number were only two years old. In five of them the growths were limited to the face, and were almost wholly seated about the eyelids.

Xeroderma, too, of which thirteen cases were observed, is placed in this group with some hesitation. The term is used here to mean simply dry skin, the integument over parts of the body, or over the whole of it, being from birth harsh, dry, and at times scaly and cracked, as if there were a diminution in the normal secretion of both sebaceous and sweat glands. The peculiarities, however, are quite as marked in the palms, where none of the former exist, as elsewhere. This same condition of the skin is also a prominent symptom in ichthyosis, and is no doubt sometimes mistaken for that affection, even when occurring independently. The cases recorded here, however, were accompanied by no hypertrophy of the papillæ, which is the characteristic and essential lesion of ichthyosis, and the scaly condition of parts of the skin was due to accumulation of epidermal cells upon the surface, not to their excessive formation.

The few cases of affections of the sweat glands were of little interest. One of the cases of hyperidrosis was unilateral and partial. The cases of folliculitis, placed in the next class, were mostly inflammations of the tissues surrounding the glands, induced by excessive action of the sudoriparous glands (sudamina). They are not, however, primarily affections of the glands.

Class IV. *Exudations* (3561 cases). The great class of exudative diseases comprises, as will be seen, more than two thirds of the whole number of cases upon the list, and is divided by Professor Hebra into the acute and chronic, the dividing line being at pemphigus (Table II.). This division seems arbitrary, because some of the diseases in the first group are chronic in course at times, — some of the forms of urticaria and erythema, for instance, — while of the latter some may be acute both in type and in duration; but on the whole, it is well founded. The first group is again divided into the contagious (the exanthemata), and the non-contagious.

The number of cases of exanthematous disease which find their way to the hospital is surprisingly small, but twenty-four cases in all having presented themselves at the skin department. That so large a proportion of these, twenty-two, were varicella seems stranger still, but can be explained, perhaps, by the facts that chicken-pox is not a "rash," that it is more variable and protracted in its period of efflorescence than the other exanthems, and that the eruption is more like that of some of the commoner skin diseases, and lasts longer than that of the others.

In the erythematous group there were seventy-three cases of erythema exudativum multiforme, eight of erythema nodosum, and one

hundred and thirty-two of urticaria. The cases of the first named were distributed about equally among men, women, and children, and amongst all ages. They were most various in kind and degree. The causes were mostly obscure, but in three of them copaiba gave rise to a general outbreak. In one of the latter the body was universally covered at first with a fine scarlet papular rash, with brilliant congestion of the mucous membrane within the mouth, so as to suggest an attack of scarlet fever until it was discovered that the patient was taking the drug. Erythema papulatum was observed in twelve of the cases, confined mostly to the hands, and in nearly all of them the disease had shown a marked tendency to recur at intervals of a year or more, and to a chronic course. Erythema nodosum occurred but eight times, and was confined mostly to the lower legs of young girls and children. The arms were affected as well as the legs, in three of the cases. In many instances erythema was intimately associated with urticaria.

Urticaria occurred twice as often with women as with men, and a large third of the cases were chronic. Only in a very few instances in either class was it possible to discover the cause of the disease, either in the action of specific excitants affecting directly the skin or organs of digestion, or in any special faults of the general economy. In a few it was secondary to other skin affections of an itching character, in which the patience of the cutaneous nerves had been long abused by scratching, and in others it was similarly induced by the harassing action of animal parasites upon the skin. Many of the patients were troubled by chronic disorders of various functions and organs, and many were anæmic and debilitated, but such troubles were not more noticeable in these patients than in those affected by other cutaneous diseases of equal frequency. Neither did the results of treatment throw much light upon the ætiology of the disease in its relations to internal disorders. In some cases, however, it seemed to have more than a chance connection with chronic disturbances of digestion. In a very large proportion of them the health was, with the exception of the urticaria, faultless in every way.

The relations of urticaria to the nervous system have, like those of most skin diseases, lately been much discussed. The grounds and methods of such agitation in general will be briefly and more appropriately considered when we come to the class *Neuroses*. Dr. Bulkley, of New York, has recently called attention to the connection of chronic urticaria with exophthalmic goitre as additional evidence of such relationship, as this rare affection, otherwise called Graves' or Basedow's disease, is supposed to be due to some disturbance of the sympathetic system. He published two cases of this sort in *The Chicago Journal of Nervous and Mental Disease*, October, 1875. To these may be added a similar case from the list of patients with urticaria.

Chronic Urticaria with Exophthalmic Goitre. — The patient was an Irish girl twenty-six years old. She had always been well and strong until 1871, when she took a severe cold, which was followed by a very hard cough and repeated hæmoptysis of three months' duration. She then gave up work and remained in bed, after which the hæmorrhages ceased and the cough gradually disappeared. During this time her lungs were examined, but no positive signs of disease of their tissues were discovered. With the cessation of the pulmonary symptoms, there came on incessant nausea and violent vomiting whenever anything was eaten or drunk; this lasted five months. At the same time she began to have severe palpitation, paroxysmal in character, and aggravated by emotions. She then noticed for the first time that her eyes were more prominent than usual, and thinks that they were forced out by straining in vomiting. Her neck also became larger than before. During this time she was seen by several physicians, but they failed to find any structural disease of the heart. The obstinacy of the vomiting led to the examination of the urine, and it was found to contain "albumen and casts," so that the symptoms were referred to disease of the kidneys. She went into the country and slowly recovered from the vomiting and partially regained her strength. During the last three years there has been little change in her condition, the most prominent symptom having been nearly constant palpitation, stimulated by emotional causes at times to the sensation of impending death. The condition of the eyes and neck has not changed in the same period. In April last, ulceration of the skin of the right lower leg took place, for which and for her general state she sought relief at the hospital. She was examined by Drs. Hayden and Knight, and mitral regurgitation and enlargement of the heart were recognized. The urine was examined and found normal.

In August, urticaria for the first time manifested itself as a general outbreak, for which she was referred to the skin department. The patient presented a startled, anxious look, and was pale. Her eyes were very prominent, and had a staring expression. Pear-shaped, flattened protuberances were seen on either side of the front neck, diminishing in size as they extended from the junctures of the clavicles and sternum upward and backward nearly to the angles of the jaws. They were soft to the touch, and when squeezed gave the patient the feeling that the "eyes were coming out of her head." The neck measured thirteen inches in its largest circumference. The urticaria exhibited itself in the form of medium-sized wheals, with occasional erythematous patches. It affected all parts of the surface, including the head. It came at all times, most frequently mornings and evenings, and apparently quite independently of diet or other appreciable agents. The attacks lasted, too, for quite variable periods, and were sometimes absent

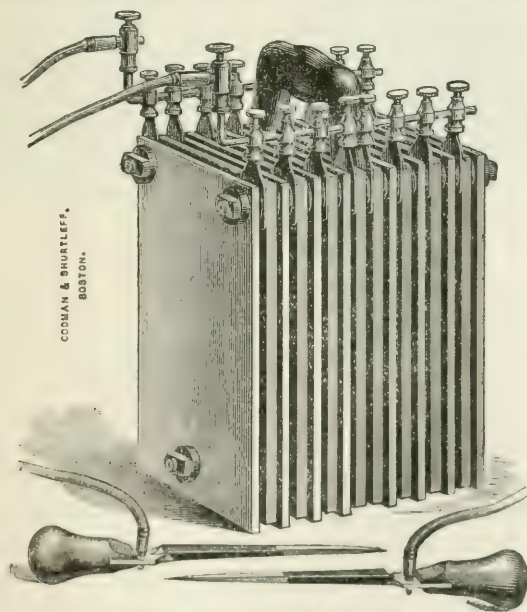
several days. The general condition of the patient was pretty good for one with so serious an organic disease of the heart. Her digestion was correct and the menstrual function regular. She was very easily startled, and the palpitation and tumultuous action of the heart then became distressing, but ordinarily, and when quiet at home, she was very comfortable. A tonic and an antipruritic wash were prescribed.

Since her first visit, her condition has remained without material change. She thinks that the severity of the attacks of urticaria are controlled to some extent by the use of the wash, and that the intervals between them are somewhat longer, sometimes extending to two or three weeks.

NEW ELECTRODES AND BATTERY FOR ELECTROLYSIS OF UTERINE FIBROIDS.

BY E. CUTTER, M. D., OF CAMBRIDGE, MASS.

(1.) *Arrangement of Plates.* — Figure 1 shows the plates, namely, eight carbons, each one fourth of an inch thick, six inches wide, and nine inches long, and eight zincs, each one eighth of an inch thick, six inches wide, and nine inches long. The carbon plates are very brittle, and very easily broken by a slight blow or jar, and thus are liable to entirely

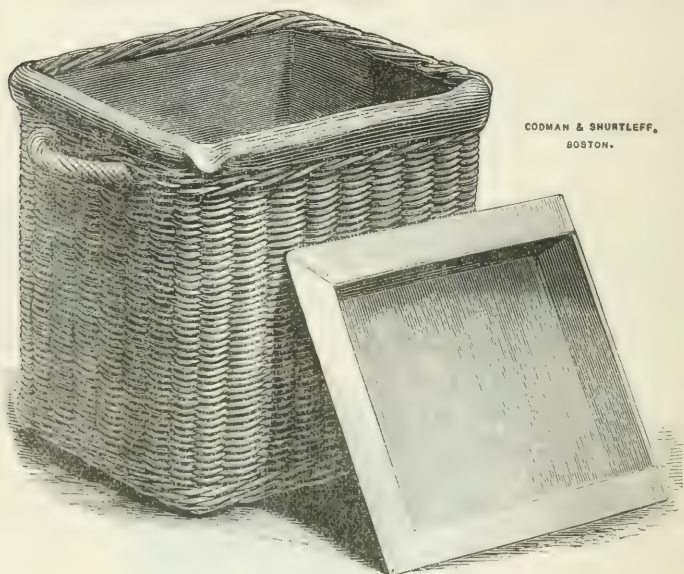


(Fig. 1.) Battery and Electrodes.

disable the battery. To obviate this, the zincs are placed on the outside, and project slightly beyond the carbons. This prevents any direct blow or jar upon the carbons. Both the carbons and zincs are set on the six-inch end (Figure 1), and are perforated by three foramina, two at the

angles at the top end, and one at the middle of the bottom end. Three cylinders of hard rubber pass through these holes, each plate being separated by rings of hard rubber, and holding the copper connections close to the plates. The ends of the cylinders are terminated by threads, on which nuts are placed; when the latter are screwed tightly they hold the plates in one compact mass. A handle springs from the midst of the plates, the two upper cylinders running through its extremities. The rest of the battery is like others of this variety.

(2.) *Rattan Cell.* — Figure 2 represents the cell and tray. The cell



(Fig. 2.) Rattan Cell and Tray.

is made of sheet lead surrounded by rattan work. This secures an elastic basis which is very light and strong, and which resists shocks admirably. The lead lining is continued up at one corner into a spout, for convenience of pouring out the exciting fluid. The tray is of tin. One side of it is square; this is for the purpose of drainage. After use, the plates are elevated to the top of the cell; a nut at the bottom of the plates is caught upon the edge of the cell. The square edge of the tray is then put under the zinc of the opposite side, and the plates are firmly held while the fluid drips off into the cell. When dry the plates are lifted off, the tray is placed on top of the cell, and the plates are placed upon the tray.

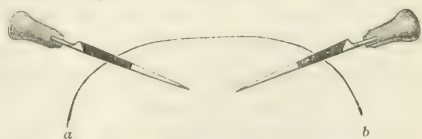
The cell is graduated in height to the plates, so that the fluid cannot immerse the plate connections. The advantages of the plates being immersed from the small or six-inch end are that less floor space is occupied, and less space is lost on the connecting end by projection above the

fluid, than if the plates were immersed on the large or nine-inch end. When less than the full amount of active battery surface is desired, less fluid may be poured into the cell. Simplicity has been studied in this battery without leaving a chance to break off the contacts of the connections, as may be seen in the cut. The two upper hard-rubber cylinders go through (1) the zincs, (2) a hard-rubber washer, (3) a connection, (4) a carbon, and so on.

The plates are easily detached by unscrewing the nuts of one side and drawing out the cylinders. They may then be cleaned and amalgamated.

Solution. — Any solution used for any battery will excite this battery. The fluid used and preferred is a saturated solution of potassic bichromate and a pound of sulphuric acid to two gallons of the solution. This strength of solution will run the battery for twelve hours. If desired, the fluid may be agitated during use by the pumping in of air from an india-rubber bulb. After the battery has been used for some time it is a good plan to soak it in water overnight. This may be done in the cell or in a bath-tub. Besides these there should be provided a stone jug, or better a glass demijohn, of two gallons' capacity; also a tunnel. It is astonishing how readily this fluid will exude through a common stone jug.

Electrodes of the Writer. — The ordinary electrode is a six-inch needle tipped with platinum. In the first operation it was impossible to introduce it into the dense fibroid over one and a half inches. The tissues tightly bind all along the periphery of the cylinder of the needle, causing the needle to twist in the hand and shorten on its own long axis instead of penetrating the tumor. Dr. Kimball, my associate, said that either a new electrode must be devised or the operation given up. It did not suit me to abandon the operation, so my ingenuity was set at work, and an electrode of steel, twisted like a corkscrew and gilded, was made, under the idea of having the twist all made beforehand. It was a failure. The electrode here figured (Figure 3) was then invented. It consists merely of an ordinary director sharpened at point and edges, fitted with a handle and partly japed. The



(Fig. 3.) Method of Abdominal Penetration.
a b, abdominal outline.

angle of the two sides of the director was made blunt. The idea aimed at was that the tension of the blunt angle would draw the tissues over the sharp free edges of the electrode. The tighter the tension the more it would cut; hence the friction would be relieved. Experience has verified the prediction, and no tumor has yet been found which the electrode does not readily, steadily, and directly penetrate. The success of this operation depends upon these electrodes. The most disagreeable part of the operation is thus done away with. For a twisting, yielding,

cylindrical electrode is a most uncertain and vexatious means of penetrating tissues that are as hard as a bullock's testicle. Figure 3 represents the depth to which these electrodes are pushed through the abdominal walls, peritoneum and all, into the tumor. The conductors are of copper wire, terminated with brass tips, and covered with worsted knit goods. They are about six feet in length.

Quantity and Intensity. — The intensity of this battery is not great. The quantity is large. I had some difficulty in estimating the quantity of galvanic fluid produced by this arrangement until Prof. M. G. Farmer, the celebrated electrician, kindly offered to measure it. He had some electrometers with which he measured the powerful batteries used to explode torpedoes at Newport, R. I. On connecting the conductors with the electrometer the needle went immediately up to 90°, the limit of the instrument! The professor stated that he should have to make an electrometer purposely, *as he had none large* enough to measure the battery. From this authority we conclude that in this battery we are dealing with no inconsiderable amount and quantity of galvanic current. This, being the constant (galvanic) current, is not perceptible to the senses. The same surface action with a broken (faradaic) current would probably kill a patient instantaneously. The writer is greatly indebted to Codman and Shurtleff for the thorough manner in which they have made this battery, and the moderate price (forty-five dollars) at which they afford it.

The Method. — This account would be quite incomplete without a brief allusion to the operation. The patient being anæsthetized, one electrode is introduced at one part of the tumor on one side of the abdomen to the depth of four inches at least (Figure 3). The other electrode is similarly introduced on the other side. The points of the electrodes as well as the electrodes themselves should not touch each other, else a thermic effect would be produced. In no case should the electrode become warm. The current is then passed through for five minutes, sometimes for fifteen minutes. Cloths wet with alcohol are placed upon the abdomen after the operation. Morphia is sometimes administered by the skin, and veratrum viride is sometimes given. Usually the immediate effects of pain pass off in a few hours. Rarely has peritonitis been induced. This immunity is one of the remarkable features of the operation. One would naturally expect peritonitis with effusion of pus, but it seems as if the galvanic current had some peculiar power in preventing the ordinary results of abdominal traumatic inflammation. In one case only has there been pus following the punctures.

The *object* of the operation is to arrest the further development of the fibroid. The *results* in about twenty-five cases are as follows: In two cases of tumor, the growth, eight inches by ten, entirely disappeared with only three applications each. In several instances the growths have

been reduced over one half. In one of these, in which the patient was as large as a woman seven months pregnant, the tumor is now imperceptible to an outside observer. The patient had been obliged to abandon her work of teaching, but has now resumed it. Two women said that for two years they had been unable to cross their lower limbs; now they can do so without difficulty. One woman, who had been bedridden, after two operations was able to be about the house; after the third she went visiting, with the tumor one half disappeared. In more than four fifths of the cases the growth has been arrested, which was all that was aimed at. In three cases no effect has been produced. In nearly all there has been improvement in the general health, the patients have gained flesh, and have been freed from pain, difficult micturition, and nocturnal colic. In several instances females who have given up this life and awaited death, have been restored to the full performance of the active duties of healthy living. In many cases of the stony, hard variety of tumor there has been a cheesy softening of the part punctured. In one case, where the fibroid was central and involved the whole uterus, the first operation was followed by a cessation of menorrhagia and by a large discharge of black, thin detritus from the vagina. On the successive operations the electrodes entered what appeared to be a large central cavity. This case has done well; the tumor remains diminished one half, and there has been a general restoration of health. Ascites and anasarca entirely disappeared after the first operation in one case. In another instance the general health much improved; pains disappeared; the tumor became smaller; the patient gained flesh and strength; she is now able to work hard all the time, whereas before this was impossible.

In the descriptions in this paper the term electrolysis is used for want of a better word. The ordinary signification of electrolysis is the decomposition of tissues or fluids by the action of a constant (galvanic) current of electricity. This is attended by the evolution of oxygen gas from the positive electrode and hydrogen from the negative electrode when water is decomposed by electrolysis. In the present case a very large quantity of constant current is passed through the fibroid. No heat, no evolution of gas, or shock attends the passage. The effects are manifested by the physiological results only, softening, reduction, and disappearance. Dr. J. R. Nichols thinks the current may act by producing ozone. What it does I know not. I think no one can tell, and it is an open question whether the galvanic current has anything to do with it; or, in other words, whether the results would not be produced by the punctures without the electricity. At any rate, at present the term electrolysis must be retained as sufficiently explicit to signify the passage of a large quantity of galvanic current from over a dozen square feet of excited surface of the plates in the battery.

The future of this operation is yet to be written. If it should be followed by relief from pain, improvement in general health, and arrest of abnormal development, we believe that its prosecution is legitimately within the province of the gynæcologist. In order to obviate misunderstanding, it is proper for the writer to state that Dr. Gilman Kimball has operated by far the larger number of times, and it is to his energy, perseverance, and boldness that the present status of the operation is largely due. The mechanical and chemical details have been the study and care of the writer.

In closing, a word of caution is added that one should be sure that his case is one of fibroid, else the operation may prove disastrous.

RECENT PROGRESS IN OBSTETRICS AND GYNÆCOLOGY.

BY W. L. RICHARDSON, M. D.

OBSTETRICS.

Management of Lactation.—In this,¹ the first of a series of monographs which Dr. Fleischmann proposes to publish on matters relating to children, the author gives a great many interesting facts concerning the management of lactation. The profession and laity have held very exaggerated views as to the influence which menstruation exerts on lactation. It is this part of the work which chiefly concerns obstetricians. The author reports in detail the results obtained by an examination of six hundred and eighty-five nursing women. Of these, four hundred and two menstruated while nursing. Of this number 10.2 per cent. began to menstruate within four weeks after confinement; 24.6 per cent. menstruated within six weeks, and 11.4 per cent. within twelve weeks. In more than one third of all the cases the catamenia reappeared in from four to five weeks after delivery. By an examination of a table of the exact times at which the catamenia appeared in a large number of nursing and non-nursing women, it would appear that while in more than one half of the latter the catamenia appeared during the first six weeks, only one in four of the former menstruated during that same time. During the first three months following confinement 71.65 per cent. of non-nursing women menstruated, while only 45 per cent. of those who were nursing menstruated thus early.

The following interesting table shows that weaning is followed by a return of menstruation at about the same period as would occur in women who did not nurse at all:—

	After Child-Birth.	After Weaning.	While Nursing.
6 weeks.....	52.82 per cent.	44 per cent.	24.63 per cent.
6-12 weeks.....	18.83	16	20.47
12 weeks-1 year.....	4.85	6	31.84

¹ Klinik der Pädiatrik. Dr. Ludwig Fleischmann. I. Die Ernährung des Säuglings dargestellt auf wissenschaftlicher Grundlage. Wien. 1875.

Immediately after weaning, the character of the milk becomes greatly changed, as appears from the following table:—

	Nursing.	Forty Hours after Weaning.
Water.....	858 per mille.	901.1 per mille.
Solid matter.....	142	98.9
Casein.....	13	1.9
Butter.....	36	34
Sugar.....	78	58.5
Salts.....	45	4.5

As regards the effect of menstruation on the milk, it would appear that the latter does not, as is usually supposed, become more watery and poorer in solid constituents, but, in reality, richer in salts, butter, and casein. If the child is nursed as frequently after menstruation appears, it is possible that disturbances of the digestion may result, namely, restlessness, colic, diarrhœa, etc. These, however, are of slight importance, and a careful regulation of the diet will suffice to remedy the difficulty without weaning.

The milk varies according to the period of lactation. The first few days after birth it is richer in butter than later, and possesses a purgative action. The secretion of true milk becomes established by the end of the eighth day, although colostrum-corpuscles are noticeable during the whole of the first month. The amount of casein increases progressively until the second month, after which it remains constant until the tenth month, when it begins to diminish. The butter increases slightly until the third month, and from the fifth it decreases. The amount of sugar increases steadily until it reaches the maximum amount between the eighth and the eleventh month. The solid constituents increase until the third month, after which they diminish. During the first two months the milk is most nourishing, although from the third until the twelfth month its value as a diet remains pretty constant.

Continued nursing after conception has taken place is injurious for several reasons. In the first place, the nourishment of the mother is naturally interfered with, and this of course reacts upon the child, and may do so to such a degree that a miscarriage may be the result. Secondly, the child is injured by the milk either ceasing or coming to resemble the colostrum in its composition. The solid constituents of the milk are gradually diminished as the pregnancy advances.

As regards the effect which diseases have on the milk, several facts are important. In all cases where the mammary ducts themselves are inflamed, the milk is found to resemble colostrum. In all diseases the solid constituents increase, while the amount of water diminishes, and this is especially true with reference to all chronic diseases. Owing to this change, disturbances in the digestion of the milk are noticed in those babies who are nursed by mothers who are sick. In light cases of puerperal disease the milk shows such a slight alteration that no

change need be made in nursing, but when the disease is well marked the child should be taken away from the breast. In cases of syphilis, the solid constituents are greatly increased in amount.

Vomiting of Pregnancy. — Dr. T. Fairbank reports¹ that by far the most reliable remedy he has ever used for controlling the obstinate vomiting of pregnancy is dilute phosphoric acid. He administers it in doses of from thirty to sixty minims in a wine-glass of water, two, three, or five times a day, as occasion may require. He considers it of special value in those cases in which the nausea becomes extreme at the sight of food. In those cases he always orders it to be taken before meals.

Dr. Pitoris gives² the account of two cases in which the vomiting occurring during pregnancy yielded at once to hyoscyamia, when all the usual remedies had been tried without any beneficial effect. The dose was a teaspoonful every hour of a mixture containing one twelfth of a grain of hyoscyamia in four ounces of some agreeable liquid used as a vehicle.

Pregnancy and Labor in Epileptics. — Dr. John S. Parry contributes a most valuable paper³ showing the deviations from a normal pregnancy and labor which may occur in women who are subject to epileptic seizures. According to his experience, and the knowledge which he has gained from the study of cases which have occurred in his own practice, he believes it to be satisfactorily proved that, as a rule, epileptics rarely have epileptic seizures during labor. They are not more liable to puerperal convulsions than other women. The labor is as likely to progress favorably in all respects with them as with other women. Pregnancy may be the immediate cause of epilepsy. In these cases, however, an epileptic fit rarely occurs during the labor, and the disease is immediately arrested by parturition. It will almost always reappear whenever the woman again becomes pregnant. In the exceptional cases in which violent epileptic convulsions occur during labor, it is as yet a matter of doubt whether it is best to hasten delivery or to trust to nature. Either form of epilepsy may result in the death of the fetus, but convulsions of this kind are not as likely to destroy the child as those which are correctly designated as puerperal.

Hydrate of Chloral in Obstetric Practice. — Dr. H. Chouppe gives⁴ an analysis of a large number of cases, reported by various authorities, in which chloral has been employed during the progress of labor. He gives also the experience which he has had, himself, in the use of this drug as an anæsthetic during parturition. His results may briefly be summed up as follows: chloral is capable of producing well-marked

¹ British Medical Journal, November 20, 1875.

² L'Union médicale, September 14, 1875.

³ American Journal of Obstetrics, August, 1875.

⁴ Annales de Gynécologie, May, 1875.

cutaneous anæsthesia. It can entirely relieve the pains of labor. Even when given in such large doses as to bring about a complete state of anæsthesia, it does not diminish the contractility of unstriated muscular fibres, including the uterus. Occasionally the pains of labor are rendered less frequent, but in such cases their force is correspondingly increased, or in other words the duration of the labor is in reality shortened. In those cases where the patient has become irritable or fatigued by a prolonged labor, in which the uterine contractions are diminished both in frequency and in force, owing to what may very properly be called inertia uteri, the administration of chloral to such a degree as to produce complete anæsthesia will almost invariably restore tone to the uterus, and thus, by reëstablishing the frequency and force of its contractions, speedily bring the labor to a successful termination. The administration of chloral as an anæsthetic has no injurious effect whatever on the child.

The use of the drug is especially indicated in tedious labors and with primiparæ, inasmuch as it is rare to find such severe pains in multiparæ as in primiparæ. Hysterical and nervous patients are especially benefited by the use of chloral. It should be given after the first stage is completed and the expulsive pains have begun. In rare cases its use may be found advantageous during the first stage. It is best to obtain a solution so made that a teaspoonful of the mixture shall be equivalent to fifteen grains. The syrup of gooseberry is an excellent vehicle, as it effectually destroys the disagreeable after-taste of the chloral. The dose of the chloral should vary from one drachm to one and a half drachms given in two doses with half an hour's interval; or it may be given, when we do not wish too rapid an effect, in fifteen-grain doses every fifteen minutes. When its administration is followed or preceded by vomiting it should be given *per rectum*. Its use hypodermically is altogether too dangerous to be advised.

Puerperal Fever. — As a prophylactic measure Dr. J. H. Miller¹ regards it of the utmost importance that a speedy contraction of the uterus should follow delivery. By such contraction the mouths of the uterine veins are securely closed, and there is accordingly much less danger of any absorption of any poisonous material. With this end in view he advises the administration of the fluid extract of ergot in half-drachm doses thrice daily for the first three days, and twice daily for ten days longer. With the same idea of preventing any poisonous absorption he occasionally washes out the vagina with tepid water containing a small amount of carbolic-acid. He also advises the free use of a weak carbolic-acid solution on napkins about the genitals.

As an abortive treatment of threatened puerperal disease, he believes strongly in quinine. He administers it as soon as the very earliest

¹ The Medical Record, August 3, 1875.

manifestations of the disease are detected. Ten grains every four hours are sufficient, in his opinion, to produce the reappearance of favorable symptoms within twenty-four hours.

Temperature in Puerperal Eclampsia. — Dr. Bourneville reports¹ the results of a careful examination of a number of cases of puerperal convulsions which he has had the opportunity of observing. During a convulsion the temperature rises from the beginning to the end of the seizure. In the intervals, the temperature remains somewhat higher than normal, an upward tendency being noted at the moment of seizure. If the case terminates fatally it will be noticed that the temperature is constantly rising, although in the intervals between the seizures a slight decline will be indicated by the thermometer. If, however, the case is to terminate favorably, there is a constantly decreasing temperature with slight elevations during the actual seizures.

As a means of furnishing a differential diagnosis between uræmia and puerperal eclampsia, the thermometer will be found of great assistance. In all cases of true uræmia, whether it occurs in males or females, whether it owes its origin to an affection of the kidneys or to an obliteration of the ureters, whether it assumes the comatose or the convulsive form, the temperature will be found to be progressively lowered, the point reached being sometimes very low. From the very first there is always a lowering of the temperature in uræmia, and an elevation in puerperal eclampsia. In the course of uræmia the temperature is progressively lowered, while in the course of the eclamptic state it rises quite rapidly from the very outset. These differences are accentuated at the approach and even at the moment of death; in uræmia the temperature descends very low, even far below the normal point, while in puerperal eclampsia, on the contrary, it reaches a very high figure.

Dr. Portal gives² three cases of puerperal convulsions, in all of which the use of chloral was followed by the most favorable results. In all the cases albuminuria existed. In one of the instances the convulsions came on six hours after the termination of the labor; in the other two, the attack occurred during the delivery. In one case the patient was delivered of a still-born child during the attack; in the second, the pains ceased on the occurrence of the convulsions, and the patient was delivered with forceps. The first patient had twenty-four convulsions, occurring at intervals of about fifteen minutes; the second had eight, and the third seven seizures. In each instance ninety grains of the hydrate of chloral were given. In the last two cases also a quarter of a grain of morphia was injected subcutaneously. All the cases terminated favorably.

Milk Diet in the Albuminuria of Pregnant Women. — Dr. Tarnier³

¹ British and Foreign Medico-Chirurgical Review, October, 1875.

² Bulletin Generale de Therapeutique, August 15, 1875.

³ Le Progres Medical, December 11, 1875.

gives the account of two cases in which pregnant women suffering from albuminuria were treated with a milk diet, and with the most favorable results. In both cases no other treatment was used. The first day two portions of food were allowed, with about a quart of milk; the second day, only one portion of food and a little over two quarts of milk; the third day, half a portion of food and three and a quarter quarts of milk; the following days four and a half quarts of milk were allowed, or even more when the patients desired it, but no other food was given.

Within two weeks after this method of treatment was begun, a decided improvement in all the symptoms was noticed. The albuminuria had decidedly decreased, as had also the œdema of the lower extremities. This improvement continued until the urine no longer showed any traces of albumen. In both cases the pregnancy terminated in the birth of healthy living children, the labor and convalescence of the mothers being perfectly normal.

Puerperal Inflammation of the Ilio-Sacral Articulations. — Dr. Ebell reports¹ two cases in which a puerperal inflammation of the ilio-sacral articulations followed delivery. The first was a primipara, twenty-four years of age, with a contracted pelvis; she had been delivered with forceps. A low type of inflammation of the joint soon manifested itself, followed by necrosis. The patient died as the result of exhaustion. The second case was that of a patient thirty years of age, who was seized the seventh day after delivery with a severe pain in the left hip. She gradually found herself unable to walk, and was for a long time confined to the bed, being obliged to lie on the right side, with the left thigh adducted and rotated inwards. The soft parts of the joint became swollen and flabby, and an examination per rectum established the diagnosis of inflammation of the sacro-sciatic articulation. A complete recovery followed the use of tincture of iodine externally, combined with compresses of cold water, and rest.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

F. B. GREENOUGH, M. D., SECRETARY.

DECEMBER 27, 1875. *Disease of the Knee-Joint; Synovial Tumors in the Popliteal Space; Free Incision into the Joint, and Cure.* — DR. FIELDFIELD exhibited a cast of a leg showing a tumor of the calf caused by the gradual distention and descent of a so-called cyst of the popliteal space. The cast had been previously shown to the society, he said, and an account of the case published in the JOURNAL of February 6, 1873. He again brought up the subject for the reason that since this period the writings of Mr. Robert Adams

¹ Berliner klinische Wochenschrift, September 27, 1875.

on rheumatic gout had appeared, in which this subject of popliteal cysts in rheumatic arthritis had been more fully and thoroughly discussed than had then been done by any writer in the English language. It was in view of this further discussion of the topic of popliteal cysts that Dr. Fifield reopened the subject.

The case of the man who was the subject of the tumor shown by the cast might be briefly stated thus: He was sixty years of age. He had had for the last twelve years chronic dropsy of both knee-joints; the distention was very great. In October, 1868, both joints were punctured with a common trocar, and the liquid, amounting to several ounces, was drawn off. The joints were then injected with tincture of iodine and water in equal parts. This proceeding was repeated three times. The last time, tincture of iodine of full strength was injected; some pain followed, and there was some inflammation, but not enough to cause a radical cure.

In the summer of 1870, after a slip on the stairs, the patient noticed a small rounded tumor in the left popliteal space, and soon afterwards another in the right. That in the left increased very rapidly, so that at the close of the autumn of 1870 it extended seven or eight inches below the joint and entirely across the upper back part of the leg, and was more than twice as large as the fist, smooth on the surface, and distinctly fluctuating. The tumor was punctured, a good deal of yellow, oily liquid was obtained, and some masses resembling bits of hard, yellow fat came through the canula. Violent pain followed. The patient became typhoidal, and three days later the whole cyst was laid open from one end to the other. The same oily-looking liquid escaped, together with handfuls of hard, yellow masses having the odor and appearance of commencing gangrene. On the following morning the typhoid condition had passed away. The extensive wound healed in a sufficiently short time by granulation. At the expiration of three or four days from this operation the knee-joint became exquisitely tender and painful; the patient again became typhoidal and prostrated. A free incision was therefore made into the joint, and a large amount of pus was evacuated. Again the patient rallied, and his health became reëstablished. The joint continued to discharge pus, however, but by the use of occasional injections of iodine this was at length controlled. The limb, which had been kept in a straight position, was now strongly flexed, and the fibrous adhesions yielded with a tearing sound. The patient, being an ingenious man, contrived an apparatus for alternately flexing and extending the limb, and eventually recovered with a very useful leg.

In the winter of 1871-72, the cyst in the right popliteal space having attained a large size and the knee-joint being greatly swollen, an incision was made into the cyst. After evacuating the liquid, free bleeding took place from the edges of the cyst, and it being impossible to find any vessels to tie, it was finally checked by the use of a solution of ferric alum. The knee-joint was now injected (directly and not from the cyst) with tincture of iodine of full strength; this was without effect, although the injection was allowed to remain in the joint. A seton was passed through the joint and allowed to remain twelve hours. At first this seemed ineffectual, but at last, characteristic pain and tenderness appeared, and the joint was laid open with the knife.

This time, troublesome bleeding occurred from the edges of the cut. Suppuration became freely established, and, soon after, the cyst in the ham inflamed, broke, and discharged abundantly, thus reversing the case of the first cyst and joint. The patient speedily recovered, and now has two useful legs.

Here the subject has rested until now. It will be noticed that the expression "popliteal cysts" is used in this report as descriptive of the tumors in the popliteal spaces; it will presently be discussed whether this term is strictly correct.

Mr. Adams, in his work to which allusion has been made, has, at page 452, as the heading of a section, these words: Bursal Tumors presenting themselves in the Ham, symptomatic of Rheumatic Gout of the Knee-Joint. He says, "In the normal state there are to be found in the popliteal space five synovial bursæ: namely, three small ones, placed externally, near to the outer hamstring; two, more important, placed close to the inner margin of the region. Of these, one is small, not larger than an almond, situated inferiorly, and belongs exclusively to the semi-membranosus muscle; it does not communicate with the interior of the knee-joint. The other, the larger bursa of the semi-membranosus, is situated superiorly to that last mentioned. When inflated it is the size of a small hen's egg, is of an ovoidal form, its greatest diameter being vertical. This, the largest of the two, is placed between the semi-membranosus and the internal gemellus, where these muscles decussate from each other. In the adult it usually communicates with the interior of the knee-joint. It appears to be formed into a multilocular cavity, and the opening by which it communicates with the knee-joint is of a valvular nature, *i. e.*, when either the joint or bursa is distended allowing fluid to pass freely between the two, providing the knee be flexed."

Mr. Adams goes on to remark, "Many years ago I publicly expressed my opinion that this larger bursa of the semi-membranosus was frequently developed into a bursal tumor which presented itself in the popliteal space, and that such swelling in this situation thus formed was *very* usually found to be associated with well-marked symptoms of rheumatic gout in the corresponding knee-joint." Mr. Adams refers to a clinical lecture of the late Sir William Lawrence during the winter session of 1837-38, as the first communication to the profession of there being any such disorder as bursal tumor of the ham."

Mr. Adams claims that thirty years ago *he* "accurately described the external signs and symptoms, as well as the anatomical characters, of these bursal tumors symptomatic of chronic rheumatic arthritis." The words of the text of the London Cyclopædia of Anatomy and Physiology in the article on Abnormal Knee are, "A tumor about the size of a small hen's egg is seen projecting into the popliteal space. This tumor reaches toward the inner head of the gastrocnemius muscle. We have known several cases of this disease in which this dropsical condition of the popliteal bursæ existed as one of the symptoms of rheumatic gout, and, the patient having had this chronic disease in both knee-joints, the dilated bursæ were seen in both popliteal spaces, presenting in each case on a superficial inspection the resemblance to one of double aneurism." "Subsequently," says Mr. Adams, "to the publication of Sir William Lawrence's clinical lectures on Cysts of the Ham, and to the

publication of his own observations on the same subject, we do not find any notice taken by any writer in these islands as to such lesions for ten years after, that is to say, until 1850, when Sir Benjamin Brodie alluded to them in the fifth edition of his work on the joints." Now the chronic rheumatic arthritis with which Mr. Adams says this bursal tumor is very usually connected is "marked at its commencement by pain, heat, and swelling, and the effusion which accompanies these manifestations gradually increases in quantity, the bursa receiving the overflow. In the later stages of the disease the synovial fluid becomes absorbed, and the patella falls back on the trochlea of the femur." If this is an established fact, it is a very important one. The operations of McDonald, Velpeau, and others for the relief of hydrarthroses by the injection of iodine are to be condemned as exposing the patient to risk when the cure of the effusion is only a question of time from natural causes. The operation practiced in the case cited may also be placed in the same category. A patient may be allowed, however, to elect in the matter if he prefer speed to safety. Although the larger bursa of the semi-membranosus has not unfrequently been opened after mistaking it for a fatty tumor, the operation being followed by death in one case, there seems to be no record of any case similar to the one cited at the commencement of this paper, and certainly none treated in a similar way, namely, first by long incision of the bursa or cyst, secondly by free incision of the joint, or of a knee-joint purposely inflamed after failure of incision of the cyst to effect such purpose, and then freely opened, the cyst or bursa subsequently inflaming and suppurating. In the case of Sir William Lawrence, he says the patient became typhoidal, the wound and knee were easy, but there appeared to be a general tumefaction of the latter. Does it not seem that had the joint been freely opened the patient might have been saved? Mr. Adams's attempts to connect the enlarged bursa of the ham with his favorite chronic rheumatic arthritis look a little overstrained. Such enlargement is not very unfrequently seen where no symptoms justify one in establishing this relation. Foucher, in his *Mémoire sur les Kystes de la Région poplitée*,¹ gives only six cases, out of nineteen of enlarged popliteal cysts, in which such complication or connection existed. Mr. Adams says that he has seen several such cases, and gives but one in detail. He marshals Sir William Lawrence's three cases of enlarged cysts, but he seems to have *forced* Sir William's third case, like a reluctant recruit, into the ranks. In regard to size, neither Mr. Adams's case nor Sir William Lawrence's nor those of Foucher seem comparable with the one shown in the cast. Sir William's first case showed a tumor as large as a medium-sized orange.

The remaining or lesser bursa of the semi-membranosus may be briefly considered. It is stated by Adams, Foucher, and others to have no communication with the knee-joint, and Mr. Adams attributes the happy result of Mr. Poland, of Guy's Hospital, in a case in which he incised a tumor lying behind the inner hamstring, to the fact that it was this smaller bursa, belonging exclusively to the tendon of the semi-membranosus, which was opened, and which had no communication with the joint; but Dr. Filfield here exhibited a plate

¹ Archives générales de Médecine, 1856, ii. 313-425.

contained in the work of Alexander Monro, published in 1788, wherein both the larger and the smaller bursæ of the semi-membranosus, were shown. The opening into the joint from the larger is seen, with a probe passed through. From the smaller an opening is also seen leading to the larger, a probe passing through it. It would seem that nothing positive can be stated of the communication of either bursa with the joint, or with its fellows, but age has a great bearing on the probabilities of this communication existing. Foucher says, "Now it appears to me that such communication, that is, of the larger bursa and the knee-joint, does not exist in youth, although the synovial sac of the tendons may be well developed; but, on the contrary, in the adult, and especially in the aged, such communication is almost constant. This appears to be due to a wearing out of the wall of the sac under the influence of the rubbings of the condyle of the femur against the capsule. Monro, in his plates, shows several bursæ of different parts of the body with holes worn in them.

Mr. Adams seemed to imagine that he was the first to call attention to a connection of the popliteal bursa with chronic rheumatic arthritis; but Monro in 1788 writes, "Thus, in rheumatic and gouty constitutions, the joints are often swelled, but when we attend narrowly to the seat of such swellings, we shall generally discover an effusion into the bursæ as well as into the cavities of the joints." Again he states, "Dropsy of the joint of the knee is a more common and a more curable disorder than I believe it is commonly supposed to be. I have kept an account of fifteen patients under this complaint, of whom eleven were completely cured by the use of blisters, and a solution of sal plumbi in vinegar, and purgatives. In two more of the number, an effusion into the joint has continued for several years." Mr. Adams, as we have seen, states that the absorption of the fluid is a stage in the natural march of the disorder, whether it be earlier or later. Monro further remarks what is nowhere else stated: "In several cases of the knee with fluctuation I have found that the fluid was lodged in the bursa behind the tendon of the extensors of the leg, and I have observed that such tumors are apt with time to terminate in an imperfect suppuration, where some purulent matter is mixed with a clear viscid liquor."

The three smaller bursæ, placed near the outer hamstring, are said to be thus situated: one behind the tendon of the popliteus muscle, one under the outer head of the gastrocnemius, and one immediately below the popliteal bursa, but more superficially, between the tendon of the biceps near its insertion and the external lateral ligament of the knee. Of these three bursæ, Foucher and Adams declare that none communicates with the knee-joint, or has any connection, consequently, with hydrarthrosis; but Monro figures, in a large plate, "a portion of the popliteus muscle, . . . and a bursa under it communicating with the cavity of the knee-joint," and shows a probe passed through it.

The word "cyst," as applied indiscriminately to the tumors containing fluid found in the popliteal space, seems misleading, if not absolutely incorrect. Foucher gives the following varieties: (1) Dropsy of the bursa; (2) dilatation of the synoviparous follicles, or follicular cysts; (3) the free serous cyst, which may comprise two kinds, the cyst primarily and the cyst consecutively

free; (4) the hernia of the articular synovia. It would seem advantageous to confine the use of the word "cyst" to the third variety. Of the cysts consecutively free, it may be remembered that before their emancipation from the pedicle which attaches them to the synovial, they may communicate with the joint.

The danger of incision of the bursæ or cysts of the popliteal space would seem to be overestimated by Mr. Adams, particular reference being made to the bursæ of the semi-membranosus. The two cases in which Malgaigne attempted to dissect out the bursa of the semi-membranosus did well at length, as have many in which incision, puncture, or puncture and injection have been practiced.

Dr. Fitfield spoke, in conclusion, of a consequence of incision as stated in the case given at the beginning of his remarks, namely, hæmorrhage. In the case of Sir William Lawrence, where the error of mistaking an enlarged bursa for a fatty tumor had been committed, bleeding set in an hour or two after the operation, and about twenty ounces of blood were lost before it could be arrested. In any similar operations this risk should be borne in mind.

JANUARY 10, 1876. *Fat-Embolism of the Lungs.* — DR. FITZ referred to a case of Dr. Cabot, recently examined at the Massachusetts General Hospital. A laboring man, aged twenty-three, addicted to liquor, was brought in from Lawrence with a fractured thigh. The bone was broken at the upper third, and there was an extensive ecchymosis on the outside of the thigh and hip.

The patient passed an easy night, but on the following day was quite feeble, with a quick pulse, 148 in the minute. Eight days after his entrance he died. His symptoms during this interval were prostration, rapid and weak pulse, moderately accelerated respiration, slight cough at the outset, and sleeplessness, for which morphia, chloral, etc., were given.

Four days after his entrance he became actively delirious, and towards the end constantly disarranged the splints.

At no time were the rational signs of pneumonia prominent, but at the autopsy there was found double pneumonia of both lower lobes.

In many of the branches of the pulmonary artery, both of the hepatized and the aerated portions of the lungs, fat drops were found which could be readily forced into the net-work of alveolar capillaries. It was not evident that the solidified portions of the lungs contained more than the relatively healthy parts. The prominent symptoms being those commonly referred to as from shock, the question naturally arises how far they and perhaps the pneumonia were to be attributed to the fat-embolism. In the recorded cases of Wagner and Bergmann, as well as in the experiments of Busch, death had taken place much earlier, from œdema of the lungs.

The brain was not examined; this omission is the more to be regretted because a strong degree of probability exists that oil globules are present in the cerebral capillaries in such cases, as well as in the lungs and elsewhere.

Embolism of the Pulmonary Arteries; Death within Fifteen Minutes. — DR. FITZ showed the specimens, from a patient of Dr. Cabot, a man aged fifty, who had suffered from chronic ulcers of the leg since his youth. He entered the Massachusetts General Hospital with an open ulcer on the left leg, and

giving a history of considerable dyspnœa with slight cough the previous two weeks, but without expectoration. For some time there had been an occasional fluttering sensation in the region of the heart. The patient was very weak, the face pale, the lips blue. The pulse was fair but rather quick. The heart's action was tumultuous, and was felt over an increased area, though no murmur was detected. The urine was albuminous, with a specific gravity of 1013; it contained granular hyaline casts, with blood and pus.

While being carried to the ward the patient had an attack of faintness. Two days after entrance, when feeling quite comfortable, he became suddenly oppressed in breathing, with a feeling of constriction at the base of the sternum. paroxysms of unconsciousness, lividity, and a rapidly failing pulse. Death occurred within fifteen minutes from the onset of the attack.

A recent thrombus as large as the index finger was found in the femoral vein. Both primary pulmonary arteries were plugged with clots; the right contained an adherent, slightly decolorized embolus, from which there had been a continued thrombosis in both directions. The clot in the left pulmonary artery was very closely wedged in. All excepting the decolorized embolus were evidently of very recent origin. The continued thrombi extended into tertiary branches. The heart was hypertrophied and dilated with chronic ventricular and aortic disease. The kidneys presented the alterations due to chronic parenchymatous nephritis, with advanced fatty degeneration.

Old Ununited Fracture of the Tibia and Fibula. — The case was that of a woman aged thirty-three, who, when two years old, had fractured her leg. She had entered the Massachusetts General Hospital for amputation, as the deformity was such (the fragments being at right angles) that she preferred to have the foot taken off. DR. PORTER, at the meeting held November 22, 1875, showed a plaster cast of the lower extremity before amputation, and also the bones presenting the false joint. The specimen was also exhibited to the Society for Medical Observation, by Dr. Porter, and the case was published.¹ The bones had been recently prepared and dried for the college museum, and were now shown again by Dr. Jackson with reference to certain interesting points, some of which were not referred to in the printed report. The tibia was fractured three inches and one fourth above its inner lower extremity. The upper fragment completely overlapped the lower, and the two formed a perfect right angle, the union being very close and strong, but not by bone. The upper extremity of the fibula, which is very slender, was united to the outer surface of the tibia very closely and strongly, but not by bone; and, evidently for the purpose of retaining it in this remarkable position, the tibia had thrown out just below it a piece of compact bone of considerable size. Below this point the fibula was entirely wanting, but the lower extremity still remained, of full size, and having its usual relations to the tibia and to the ankle-joint. This fragment of bone, which was scarcely one and a half inches in length, terminated superiorly in a sharp point. The tibia having been sawed longitudinally, there was seen to be only the trace of a central cavity in the lower fragments, and none at all in the upper.

The patient, as already reported, broke her leg when she was two years old and had it amputated at the age of thirty-three, as an incumbrance.

¹ Boston Medical and Surgical Journal, January 10, 1876, page 74.

JANUARY 24, 1876. *Large Fibroid Tumor of the Uterus.* — DR. WHEELER reported the case and showed the specimen.

Mrs. T. R., aged fifty-seven, menstruated early, and married at nineteen years of age; she had but one child. When she was at the age of twenty-four the tumor was first discovered pressing up above the pubic bone, a little to the left of the mesial line. Two years after this date Dr. Wheeler examined the patient, and diagnosed a uterine fibroid as large as a medium-sized cocoa-nut, the uterine cavity measuring four inches in length. From this stage onward the growth of the tumor was very gradual, affecting the general health of the patient but little. She suffered from the weight and pain from pressure, and also had at times severe menorrhagia, which followed her until the menopause took place, two years since (at the age of fifty-five); subsequently to this event the growth continued gradually to diminish in its size until the patient's death. During the last few years of life she had some urinary symptoms, the bladder and the kidneys became troublesome, there was continuous pain in the left lumbar region, and pus appeared in the urine; at times in the last six months pus from the central portion of the tumor made its way through a fistulous opening into the vagina. There were no cerebral symptoms.

Autopsy, twenty-four hours after death. There was great emaciation of body. No œdema of the lower extremities was found; there was no ascitic fluid, and the peritoneum was free from adhesions. The fibroid filled two thirds of the cavity, and reached nearly up to the ensiform cartilage.

The bladder contained pus. The right kidney was enlarged and in a state of fatty degeneration. In place of the left kidney a cyst was found filled with a thin fluid, undoubtedly produced by pressure obstructing the ureter, which was elongated and of the size of a finger. The anterior wall of the uterus was healthy; the cavity extended the whole length of the tumor (twelve inches or more). The weight of the tumor was twenty-three pounds.

DR. JACKSON remarked, in reference to the great size of the tumor in this case, that uterine fibroids seem disposed to grow to a much larger size in this country than in Europe. He referred to the case that was reported to the society by Dr. Wheeler two or three years ago, and afterwards published in the *Boston Medical and Surgical Journal*; the uterus, with the tumor, which was shown to the society, weighing fifty-two pounds. And the perfectly enormous tumor that is described and figured by Dr. Gross in one of the early editions of his work on *Pathological Anatomy* might be instanced. He had notes of specimens that he had seen in foreign museums, and that were spoken of as "enormous," but which, in regard to size, would attract very little attention here.

The uterine cavity was greatly elongated in Dr. Wheeler's specimen, as it very generally is in this disease. But, Dr. Jackson remarked, there may be a large fibroid developed toward the peritoneal cavity, without elongation; as, on the other hand, in a case of encysted ovary, the uterus may be elongated as well as the Fallopian tube. He had long ago observed these facts, and had more than once remarked to the society upon the importance of bearing them in mind in the use of the uterine sound.

DR. STORER also spoke of the almost constant lengthening of the uterine cavity in case of fibroids, and its comparative rarity in ovarian disease.

Rupture of the Heart; Embolism of the Coronary Artery. — DR. E. G. CUTLER reported the case and showed the specimen.

The patient, a woman seventy-seven years of age, had complained for two or three days of more or less pain in the precordial region, which was easily controlled by simple remedies. The day before she died, the pain, never of great intensity, shifted to the left shoulder and extended down the arm.

The autopsy gave the following appearances: The lungs, with the exception of an old cicatrix in each apex, were healthy; there were small old adhesions to the parietal pleura, corresponding with cicatrices. The pericardium was distended with bloody serum and a large, dark, soft coagulum. The left ventricle was contracted; the right auricle and ventricle were partially contracted. There was a rent in the right ventricle about an inch in length, from which a dark clot protruded; the rent was near the base of the ventricle, directly in the course of the right coronary artery. A probe passed from the rent into the right ventricle. On cutting open the heart a broken-down thrombus was found in the left ventricle. The coronary arteries were much dilated in the commencement of their course, and were calcified; on cutting open the right artery an embolus was found completely plugging it. On microscopical examination the heart was found to be everywhere fatty degenerated. The wall of the right ventricle was thinner than normal, and friable, and the change in nutrition caused by the embolus was considered to be the determining cause of the location of the rupture. The uterus was much atrophied, and had on the fundus at the posterior portion a calcified fibroid of the size of a cherry. Calcified blood-vessels were found in Douglass's space.

DR. FITZ said that this specimen reminded him of the case of the late Dr. Hitchcock, where an embolism of the coronary artery was also found, the angina pectoris being more marked. In that case, however, there was no rupture, but the plugging of the artery had caused an extensive acute fatty degeneration of the substance of the heart, a sort of anamic necrosis. In Dr. Cutler's specimen the fatty degeneration was evidently the result of a more remote cause, the chronic inflammation of the coronary arteries; the relative position and age of the embolus and the rent suggested an intimate connection between the two.

DR. JACKSON said that Dr. James Jackson used to remark upon pain in the left shoulder as an occasional symptom in acute pericarditis, and that it sometimes extended down the arm as far as the elbow. From the occurrence of this symptom in the case of his son, Dr. James Jackson, Jr., he was led to diagnose pericarditis, and an examination after death showed that he was not mistaken.

The uterus in Dr. Cutler's case was examined by Dr. Jackson, and the upper extremity of the cervix was found to be obliterated. This condition of the organ he had often met with in old women; the cavity of the body sometimes containing a viscid, colorless serum, and sometimes a bloody fluid, with ecchymosis of the mucous surface.

DR. ABBOT said that he should not consider pain in the left shoulder a pathognomonic symptom of pericarditis, as he had seen several cases of this disease during the past year, in none of which it was present.

PROFESSIONAL EDUCATION AT HARVARD.

THE annual report of the President of Harvard College contains several interesting statements in reference to raising the standard of education in its professional schools. Important changes have taken place in the plan of instruction employed by the law school as well as by the medical department of the university. In regard to the preliminary examination which is to be demanded of applicants for admission to both of these schools at the beginning of the year 1877-78, he says the university is only doing its duty to the learned professions of law and medicine, "which have been for fifty years in process of degradation through the barbarous practice of admitting to them persons wholly destitute of academic culture." It is the faculties and governors of our professional schools who are responsible for this condition of affairs; having but feeble faith in the value of academic training, or being afraid of diminishing the number of their pupils, they have failed to demand of candidates for admission an adequate general education. This attitude of the professional schools has acted as a direct injury to the high schools, academies, and colleges of this country, "which have been deprived of the legitimate support which in every other civilized country they derive from the fact that only through them can the learned professions be reached."

While the old system of lectures prevailed, the ignorance of the students in attendance did not become apparent; but under the improved methods of instruction now employed, by which the student is brought into closer contact with his teacher, and is obliged to take an active part in the exercises of the school, the presence of a large number of uneducated students of the standard with which many of us are only too familiar would become a serious impediment. The importance of an academical training, as well as of much of the work which should be exacted in a properly organized school, is considered by President Eliot, and, as we have already shown, by no less an authority than Professor Billroth, valuable not for the sake of the knowledge which the training imparts, but for the mental power which it develops. There are exceptional persons who succeed by force of great natural endowments; we have many such in our profession. In regard to these men, Mr. Eliot forcibly remarks, "Genius has seven-leagued boots, but common men require a well-made road."

It was thought that the vigorous measures introduced into the professional schools would seriously affect their income, and thus lessen their efficiency. A glance at the receipts of the medical school for the last three years will show that there are no grounds for any such fears. In the first year of the new organization, 1870-71, the income of the school was \$27,717.67. It had fallen off several thousand dollars in the third year, but subsequently it increased steadily, and in 1874-75 amounted to \$36,661.58.

We find also that the proportional number of students drawn to the school from without New England and the British Provinces has doubled in six years, and the proportion of students who hold literary or scientific degrees has nearly doubled.

Another very significant fact is the increased average length of residence at

the school of the persons admitted to its degree. This is clearly shown by tables given in the report. In 1872 only twenty per cent. of the persons graduated had spent two years or more in the school; in 1875 ninety per cent. had been in residence two years or more, and forty-seven per cent. had been three years in the school. Finally, it has been found that the number of students who remain at the school during both terms has rapidly increased since 1870-71, when but a little over one fifth of those who attended during the winter term remained for the summer term. Last year nearly seven eighths of the number present for the first term remained for the second term. It will be readily seen that a school which can introduce successfully a method of teaching entailing an increased length of residence of its pupils, can suffer a reduction in their number without a diminution in its money receipts.

We commend this report to all teachers of medicine as a document well worthy of careful study. We offer no excuse for alluding so repeatedly in our columns to the subject of medical education, as we are convinced that there is no subject to-day of so vital importance as this to the profession in the United States.

HANGING AS A FINE ART.

THE discussion concerning the manner of executing criminals that wakes up every now and then has just been reopened in Ireland by a paper by the Rev. Dr. Haughton on the method of hanging. It may be remembered that in his work on Animal Mechanics, that appeared in 1870, he turned somewhat aside to give a formula for the length of the rope, which should be deduced from the weight of the criminal. It is briefly as follows: "Divide the weight of the criminal in pounds into 2240, and the quotient will give the length of the long drop in feet." According to this a criminal weighing one hundred and sixty pounds should fall precisely fourteen feet. In 1865 a man weighing one hundred and sixty pounds was executed at Dublin with a fall of fourteen feet six inches. The neck was broken, and all the soft parts except the skin were cut through by the rope. In 1870 Andrew Carr, who weighed two pounds less than the last-mentioned criminal, was executed with a drop of fourteen feet. But to the horror of all concerned, especially of the jail physician, who had put his trust in mathematics, the head was completely severed from the body. This was considered highly unsatisfactory by every one, excepting probably the criminal, and Dr. Haughton was requested to investigate the facts. He made the very interesting discovery that this accident was due to the want of elasticity of the rope. He compares the circumstances to those of bringing a ship under headway to a wharf by a hawser. If this be firmly attached at each end, it will be snapped; but if it be allowed to give slowly by being coiled once or twice around a post, it will gradually arrest the ship. Thus an inelastic rope will have a shearing action which an elastic one will not.

Another point of equal if not greater importance is the position of the knot. There are three chief places for it, to wit, under the occiput, under the ear, and under the chin. The first of these is the one that till of late has been used in England; the subaural is that now most generally in use there, as it is here in America; the submental one we agree with Dr. Haughton in consider-

ing the best. The danger is that it may slip off or to one side, but this may be obviated by drawing it pretty tight, or better still, as suggested by Dr. Haughton, by running the rope through a small iron bar to rest under the chin. The advantage of this is that with a drop of some length the face is thrown so violently upward that a fracture or dislocation is very certain. Even if this should not occur, the shock must be sufficient to produce insensibility. With this arrangement of the knot, a tolerably elastic rope, and a drop of about ten feet, we may gain all that is desired in capital punishment: an impressive, painless, and disgraceful death.

MEDICAL NOTES.

— We have received the first number of *New Remedies* in its new form. It has become a monthly journal, and will hereafter be issued on the 15th of each month. It contains much valuable matter, and promises to become a very useful journal to druggists and pharmacists. — Among the new medical journals appearing this season is the *West Virginia Medical Student*, a monthly medical periodical edited by James E. Reeves, M. D. It is the only medical journal published in West Virginia. It has already met with considerable success. — Number IV. of the second volume of the Transactions of the Society of the District of Columbia contains articles on hypertrophy of the heart with valvular disease, aneurism of the aorta, and accounts of two monstrosities. The discussion on these papers is given in detail, and the report shows considerable activity among the members of the society. The committee on publication are Drs. Kleinschmidt, Ross, and W. W. Johnston.

LETTER FROM BERLIN.

MESSRS. EDITORS, — The question used to occur to me, as I presume it does to many an American medical student, why so many Americans go abroad to study, while we have so large and so rich medical schools at home. So far as "studying abroad" is concerned, it is not, certainly, without many disadvantages. To learn a new language, a new medical vocabulary, new stand-points of treatment; to acquire the habits of an European people; to forget the luxuries of a practical American life, — such are some of the obstacles to successful study. One must, however, look at the distribution of American students to determine their purpose in selecting a foreign university. It is not the medical undergraduate who is abroad; such are exceptions. It is either the young graduate who seeks a specialty before undertaking general practice, or the practitioner who after a few years of work at home wishes to improve himself in his specialty, or to pursue the never-ending investigations which pertain to the fundamental studies of physiology, pathology, and physics, for which the German universities, par excellence, are so justly celebrated. I firmly believe that an undergraduate can do better at home, certainly as to clinics and the opportunity of seeing dexterous operations.

In the old Friedrich-Wilhelms Universität of Berlin there are matriculated in this winter semester, from November to April, 2143 students, of whom 263 are regular students in medicine. This number does not include 2000 more, who are distributed in the schools of mining, agriculture, art, etc. I am unable to give the number of American medical students, but of the 4100 there are 62 from America, of whom seven eighths are from the United States while all Great Britain sends only 12. This gross difference may be accounted for by the fact that the universities of Great Britain are well prepared to receive students who seek a higher education. It is, however, by no means true that one may receive the best instruction in a large town. Much is to be learned at smaller universities, as those of Halle, Leipzig, Würzburg, of Germany; Zurich, of Switzerland; and Utrecht, of Holland. One may naturally infer from the system of instruction that a result obtains here which does not accrue to an American medical school. The audiences are small and are distributed all over the town, where the different branches of instruction are given. There are sixty-six professors and instructors in the medical department alone, giving an average of four students to a teacher. Du Bois Reymond in physiology, Virchow in pathology, and Langenbeck in the surgical clinique probably command the largest medical audiences.

The experience of the American student on coming to Berlin is universally peculiar. Arriving here with the full purpose of hearing the "opening lecture," he starts out bright and early on the morning of October 16th, as directed in the official circular, to listen to Professor Virchow; but he is confronted with the half-Latin, half-German announcement on the bulletin board that Virchow will first read on November 7th, hour not stated. Retracing his steps through the immense grounds and the long halls of the Charité, a hospital whose full outfit of beds in all departments aggregates seventeen hundred, he tries Professor Frerichs's medical clinique theatre, and finds himself put off to November 5th, two days better. Punctually at two o'clock P. M., he walks over to the Jewish end of the "medical quarter" of the town to see Baron Langenbeck's first public surgical clinique; but here again is he disappointed; he looks upon an old-fashioned, dangerously-steep amphitheatre of one hundred and twenty seats, and slowly translates the announcement that Professor Langenbeck will first operate in three weeks or so. Such is the story. However, a few days of search and of Yankee inquiry, and of study of the official circular, will acquaint him with several small special cliniques which he can visit daily, and where he is as welcome as at any similar institution at home. It is, I am told, peculiar to this university, the method of having these so popularly known "universität-kliniks" in every quarter of the town. Naturally the vicinity of the Charité, known as the "medical quarter," contains the largest number. One can hardly walk five minutes here without seeing in a parterre, or second flight, the announcement of a royal university clinique for special diseases. On comparing the location with his official circular, he finds that this uninviting, dingy, brown building is the location of Professor Schweigger's eye clinique, Schweigger having been for so many years Graefe's first assistant, and now his successor to the university professorship; and that larger but equally ancient-looking structure in a side street is Lucae's ear clinique, where

also, in another part of the building, is Langenbeck's daily surgical clinique. A custom prevails here whereby clinical instruction is made exceedingly profitable; it obtains chiefly with the privat-docents, or official instructors. They hold once or twice a week a free public clinique, open to all students. As a rule, it is held in their private offices, and some of them fall on Sunday morning. It is usually confined to special instruction, and the audiences are small; full opportunity to see and to ask questions is afforded, and the student who can appreciate cannot but profit by the opportunity. Yankee inquiry alone explained to me the arrangement, peculiar to Germany, I believe, and one which is not popular at home, so far as I know. The instructor who presents the largest number of names of students is, *cæteris paribus*, entitled to first consideration when the selection of a new professor is to be made. This does not apply to cliniques alone. For instance, Dr. Tobold is not yet a professor; in his capacity as instructor he gives a course on laryngoscopy, one hour a week, clinical or didactic, throughout the whole semester; so, too, Fraenkel on laryngoscopy and rhinoscopy, Hirschberg and Schoeler on the eye, Weber-Liel on the ear, etc. These are free to matriculated students. Every such instructor has in addition a private course, at an average price of five dollars, consisting of from ten to fifteen hours. It will readily occur to those of your readers who have studied in Berlin what their impression is of these courses by the instructors. My own opinion is that one can learn much more from them than from the professors.

In Vienna the arrangement is somewhat different. The courses are of eight weeks' duration, and are so arranged that the student can pursue allied branches together, thus working with more rapidity; whether the plan produces better results I am not prepared to say. It is the general impression with foreigners that Vienna is the city to visit for special medical study — a statement which in so broad a view will hardly have corroboration. Before one makes a start for a German university, let him satisfy himself as to what he wants to do; then acting upon advice at home, or in London or in Paris, he should go directly to the destination intended, whether it be Vienna, Berlin, Leipzig, or Prague. The courses change but little from year to year as to time. Of one point I am satisfied; a student can find enough to do in Berlin, and the town itself is more conducive to study than Vienna. Naturally the German is better; but, allow me to add, one must forget Hanover or Brunswick or Magdeburg, in alluding to Berlin German. Lastly, the theatres are good and not expensive, to the best of which the matriculated student has the *entrée* at half price.

A provision in the will of Von Graefe fell under my eye the other day, which is of peculiar interest. It was that his immense eye clinique at the end of Karlstrasse, in which Dr. Richard H. Derby, of New York, was an assistant at the time of Graefe's death, be abandoned. The request was complied with, and there is now an ordinary *destillation*, or liquor shop, upon its site. The result is that as one stands on the corner of Karlstrasse and Louisenstrasse one may see no less than five eye clinics, conducted under the auspices of the assistants of the renowned oculist. There are thirteen eye clinics in the town, but these five are the direct result of Von Graefe's work in that part

of Berlin. His clinical armamentarium is to be seen daily, still in use by his assistants, and it would be strange if some of it had not gone to America.

My letter has been chiefly upon the opportunities of medical study in the university at Berlin. The intention was, if possible, to assist students who contemplate devoting any time to study in Germany. While Virchow, Helmholtz, Langenbeck, and Du Bois Reymond are beacon-lights attracting medical students to Berlin, it must be remembered that minutiae are learned more from assistants, and by private instruction and hard personal application, than directly out of the mouths of these men. Even an American can hardly afford the money, and certainly not the time, to attain merely the distinction of possessing the signature of these men. A word about Virchow, and I will close. All in all, he is one of the most remarkable medical men I ever knew. His personnel is by no means striking. He is below the average German stature, of a dingy complexion, and with an impassioned expression; one fails to detect the depth of his researches in science, or the strong will or the cutting sarcasm which characterize him. An hour in the Pathologisches Institut easily demonstrates his accurate study in that part of medical science to which he has devoted the most hours of the best part of his eventful life. His political tenets, at variance with those of the chancellor of the empire, and in sympathy with that large radical party of Germany whose ideal may be seen in nearly every European government of to-day, call it by whatever name you please, liberalism, radicalism, or conservatism, have developed an iron will and a bitter sarcasm which make him a species of terror to the government. In other ways is he remarkable. Always late at his lecture, and appearing now but twice a week, he has time enough, apparently, for the numerous demands made upon him. On the same day he is to be seen from nine to eleven A. M. in the Pathologisches Institut, demonstrating, with a vast array of material, cellular pathology; and from five to seven or eight P. M. in the Chamber of Deputies of Prussia, of which this week he was elected vice-president, over the nomination of his predecessor; later, hard at work in the Royal Geographical Society. Besides these official appointments he is chief editor of a popular journal of science, contributes occasionally an article to scientific bodies, and gives popular lectures in the winter. I have alluded to his life as an eventful one. It may not be generally known on our side of the water that, in the revolution of 1848, he fought as a common soldier behind the trenches; that he was forced to abandon his professorship here on account of his political doctrines, and that he went to Würzburg, where the book of his life — the exposition of the cellular pathology — was written; that the government was obliged to recall him to his department in the university on account of the urgent demand of scientific men, who recognized his worth by the new book; that later Prince Bismarck challenged him to a duel, whose acceptance he had the courage to refuse; these and many other events of his life make Rudolph Virchow one of the most conspicuous men of the day in Germany. I am told that he regrets the comment not long ago made about him, that he was a severe critic as to the merits of other men. Virchow is poor, lives on the second flight, and complains that he cannot live as a gentleman of his standing should. A sketch of his life,

by Herbert Tuttle, of Berlin, formerly of Boston, will shortly appear in the Routledge series, under the title of German Political Leaders.

Very truly yours,

MED.

BERLIN, January 5, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING FEB. 5, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	566	28
Philadelphia	800,000	335	22
Brooklyn	500,000	243	25
Boston	342,000	191	29
Providence	100,700	29	15
Worcester	50,000	15	16
Lowell	50,000	14	15
Cambridge	48,000	19	21
Fall River	45,000	9	10
Lawrence	35,000	11	16
Lynn	33,000		
Springfield	31,000	15	24
Salem	26,000	10	20

Normal Death-Rate, 17 per 1000.

THE members of the Boston Medical Library Association propose to open their rooms on the 22d inst. for the inspection of all physicians, dentists, and pharmacists who may feel inclined to take advantage of a holiday to see for themselves the progress which has already been made in the establishment of a useful library for consultation. Through the energy of those who have inaugurated this undertaking, the list of periodical literature which is to be found on its catalogue comprises a very large number of American and foreign journals, while generous contributions from private libraries have supplied back numbers of periodicals and many rare and useful medical works. The size of the collection is rapidly assuming such proportions as to insure its ultimate success. There are many features the advantages of which are not apparent without personal inspection. We understand that the bodies as well as the minds of the guests of the association will receive refreshment, and we strongly advise those, who may have the opportunity, to visit the association's rooms in Hamilton Place.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held on Monday evening, February 21st, at eight o'clock, at the hall in Temple Place. Reader, Dr. C. P. Putnam. Subject, A Case of Croup.

ERRATUM. — In the clinical chart published in connection with Dr. Richardson's paper in the JOURNAL of February 3, 1876, the first vertical red line, marking the date at which local treatment was begun, should be opposite October 20th, instead of October 22d.

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ON VERSION OF THE CHILD.

NOTES OF A LECTURE AT HARVARD MEDICAL SCHOOL.

BY CHARLES E. BUCKINGHAM, M. D.,

Professor of Obstetrics.

I HAVE spoken of what is called external version, and of the plan of combined external and internal version, which was the subject of an interesting paper by Dr. J. Braxton Hicks, of London. Before going on with the subject of internal or podalic version, I wish once more to call your attention to the method of preparing yourselves for the operation. You have both body and mind to prepare. Are you capable of going on with the work? Do you know what you are to do? If not, stop at once and send for some one else. The time to summon assistance is not after you have begun the operation, but before.

Do you know what the position of the child is? If not, find out all you can before you pass your hand. The child usually comes head first into the world; but almost any part of the head may be in advance, and almost any part of the trunk may be at the entrance of the pelvis; or you may find either knee, or either foot, or either hand. You may find the presenting part to be low down in the pelvis or up above the brim. You may have a well-dilated os uteri or a rigid and undilated cervix. The membranes may happily be entire, and your patient fresh and hopeful; or you may find her despondent, with the water drained away long before you saw her, and the uterus firmly compressed about the child in consequence of the improper use of ergot.

Well, what is to be done? If she should be in convulsions, etherize her, so that you can have time to think, and also to prevent the violence of the paroxysm. Keep her etherized until you have decided how to go on. If she should be flowing much, you have very little time for deliberation; therefore do all the thinking possible upon these points before you see the cases. In any instance, remember that very many women have gone safely through this operation, and that what you are going to do is for the relief of suffering, to save one life and perhaps two lives. There is nothing to frighten you. If you are frightened send for some one else to do the work, while you stand aside.

Look at this *foetus*. Both knees are drawn up against the abdomen; the head is bent forward, with the chin against the thorax; the elbows are against the chest, and bent so that the hands are turned upward toward the chin. That is the most common way for the child to be packed. The package is egg-shaped, and the larger end of the egg ordinarily, in forty-nine cases out of fifty, at least, lies downward. The lungs of the child have never had air in them. Where are you the more likely to hear the *foetal* heart? Why, the point is upon the abdomen of the mother, behind which the left side of the child's backbone lies. As you see, that part of the child is the nearest to the heart of the child, and the point where its sound is likely to be loudest and most distinct. If the water be drained away to any extent, you will perhaps see where the head is and where the breech is, and, if unable to do that, you can make out these two extremes by your hands carefully moved about on the abdominal surface. Now, you have found where the head is and where the breech is, and where the *foetal* heart sounds the loudest. I think any one of you could now draw the outline of the child, in imagination at least, on the mother's abdomen; and before you pass your hand, you know about where the feet are to be found. But perhaps you may not hear the *foetal* heart. There may be other sounds to prevent, or the child may be very feeble from long-continued compression, or it may be that it is dead. I do not always hear the sound when the child is alive, and do not believe that any one of you will always be able to. Suppose that I cannot hear it; then I try to make out as much as possible by external examination. If that does not give me any aid, and a fat abdomen may prevent, what next? An internal examination. Is the woman to lie on her back or her side? That is to depend on her strength, or upon her ability to breathe more easily in one or another position, or upon your method of working. Indeed, before you get through with the operation you may find it necessary to have the woman turn from her back to her left side, or to her right side; you may have her lengthwise of the bed with her shoulders elevated, or you may put her on her back across the bed, with her feet supported upon chairs.

But stop a moment. How is our patient's pulse? How is her skin? How are her pains? The pulse may be perfectly good, and her pains continue well. There is no reason for waiting, then. But perhaps the pulse is very feeble and very quick; her skin, which a few hours ago was moist and warm, has become cool, and she has had no pain for some time before you saw her. On the whole, then, it would be as well to wait for reaction to come on. If you interfere now, you may cut off the small chance which she still has. Stimulate her with anything you can get her to take. The doctor or midwife who has been with her for hours before you came has forgotten to feed her, and has neglected

to see to her bladder. All he has been trying to do has been to hurry a case which would have done better if left alone. Give her any stimulant you please which she can take, — wine, brandy, rum with milk, or broth, — and if her depression be very great, let her have an opiate. “An opiate,” you say, “will put her to sleep.” Perhaps it will, perhaps not; but I should hope for the former effect. If you can get her a few hours’ sleep, she will wake with new strength, and you may go on with turning or with any other operation with much more probability of saving your patient. But if she is so very weak, the dose of opium, which would produce ordinarily a long and perhaps a suspicious or a fatal sleep, will simply stimulate her. Perhaps she cannot retain opium upon the stomach. Very well, throw under the skin an eighth or a sixth of a grain of morphia; and if in half an hour she is not positively warmer and more quiet, with a slower and stronger pulse, repeat it.

As soon as this has been done, and again before you begin to pass your hand, see to the bladder. Use a long gum-elastic catheter for this purpose, and do not keep poking about under cover to find the urethral meatus. Neither delicacy nor comfort requires this. See where your instrument goes. If the head is pressed down into the pelvis in any case where it becomes necessary to catheterize, — I do not refer to cases of turning, now, — press it back, if you can, and see where your catheter goes. If you do not, you may put it up into the uterus instead of into the bladder.

But all this aside. You have made your external examination, and know what you are to do; or, not having found out, and your patient being prepared, you are going to examine internally. Keep as calm as you can. You will learn nothing by being excited or by hurrying. First of all, wash your hands. Wash them clean. Use hot water, soap, and a nail-brush if you can get one. If you get into the habit of doing this work without washing, you will soon get careless and go from some case of contagion to do your work. Have your coat off; your shirt-sleeves rolled up; a sheet fastened about you; your hand oiled. But which hand will you use? The one you can use the easiest. I use either, as the patient may happen to be lying; but before I have found the position of the feet I prefer the right hand, if the patient is lying longitudinally on her back on the right side of the bed; because as I stand with my back towards the foot of the bed, and my right side to the bed, this hand will pass more readily into the hollow of the sacrum, and I may not have to remove it. If she is on the other side of the bed I prefer the other hand for the same reason. If she is lying on her left side, with the buttocks to the edge of the bed, the left hand will work the easier. If she is on her right side, why then, for the same reason, I should use the other hand. Now, gentlemen, you may find this a very easy operation; you may reach a

foot or a knee, and finish the whole matter in three or four minutes. You may feel satisfied, however, from the beginning, that mutilation of the child must be done; but the patient prefers to go through with a long and tedious attempt at turning, first, and you may consider it safe. You may be obliged to remove your hand because it is tired out, and try the other. You may sit in a chair, or on the bedside, or you may be obliged to kneel; yes, in consequence of lowness of the bed, you may even be obliged, as I have been before now, to lie on the floor to do the work. You may find a moist, distensible vagina, or you may find it small and not much lubricated with mucus. You may find a well-dilated os uteri, or it may be a partially dilated and rigid one. The latter condition you are not likely to find in most cases where turning is necessary or advisable. You may feel the child's ribs or an axilla, which is not to be mistaken for the cleft of the nates. The hand of the child may be the part you first touch. Do not mistake it for a foot. How is this possible? Why, the parts may be so contracted about your hand that your touch is very much impaired. Still you may be able to close the fingers into the palm, and you may be able easily to make out the thumb. There may be room enough to enable you to distinguish a heel. If there is not room, what objection is there to pulling down the limb? None at all, if you can do it. The uterine contraction is perhaps powerful. Wait till it has relaxed. Indeed, if your hand has got well into the uterus you will probably be obliged to let your hand flatten out upon the surface of the child, in consequence of the pain which you will experience. But as soon as the contraction ceases, grasp the part again between two of your fingers, rather than with your thumb and fingers. The act requires less room. Suppose you have a foot. That is what you were hunting for. Draw it down. It does not advance. Well, do not let it go back. Hold it firmly, if you have got it, and, during the next interval between pains, manipulate with the other hand on the outside of the abdomen, and you will soon find a change taking place in the form of the abdomen, and an advance going on. If not, you will feel sure that if you could get both hands into the uterus you could easily turn the child. That of course is impossible; but you can many times do what will be equivalent to getting both hands in. With the help of an assistant you can pass a noose over your fore-arm and up over the ankle of the child. That is as good as one hand, and will enable you to make traction yourself, or, still better, you can let your assistant draw steadily upon it, while, with one hand in the uterus and one outside, you manage to manipulate to advantage. If the child is surely dead, you may grasp this foot with a pair of strong forceps, instead of using the cord, and go on in the same way.

But suppose you are sure that it is a hand which you have got in your grasp; then what are you to do? To begin with, let me say again,

do not be alarmed. If there be room enough, why, let it alone, and hunt for a foot. You will be surprised at the amount of room in that uterus. You will be astonished at the number of limbs that you can feel; knees, elbows, hands, and feet seem to be everywhere. Grasp a knee, if you can, and draw that down, or a foot; and one foot is enough. If you can turn with one foot it will be better than two, because there is less reason to fear compression of the umbilical cord after the body is born as far as the umbilicus. We will suppose that you have got a hand, and there is not room to feel for anything else; pull that down as far as you can, to enable you to find the position of the fetus. You need not fear making the case any more difficult by doing so. You are sure it is a hand. Supinate it in the vagina, or out of the vulva, if you can get it so far, and thus find out which hand it is, and which way the child is lying. If the thumb and your thumb are on the same side when the palms meet each other, you will know that this particular upper extremity corresponds with the hand that you are examining with. If the thumbs do not come together, they are not hands of the same side. Furthermore, if you have drawn down this arm and supinated it, the palm of the child is aiming exactly in the direction of the anterior surface of its body, and the thumb is pointing in the direction of its head. Put a cord about the wrist to keep the extremity on one side or other of the pelvis, while you introduce your hand again; and knowing where the head lies, where the anterior part of the body is, and where the back of the child is, you will have no great doubt about the position of the feet. In most cases you will have no further difficulty. Drawing down the foot when you have grasped it, relaxing the hold upon the upper extremity, manipulating externally, — all this during intervals between pains, — you will usually find the hand drawing back, and the child turning in the uterus and coming down. Now keep pressure on the abdomen, so that if possible the chin may be flexed upon the sternum, and extract slowly and during pains. There need usually be no hurry until after the umbilicus is born. Then, however, extract as rapidly as you can, because the cord is going to be compressed, and if too long compressed the child will suffocate. Remember that its breathing apparatus, before it is born, is the placenta, and as soon as the cord is compressed the child will struggle as if it were in the world and access of air was prevented by a string about its neck.

Remember also that anterior dorsal positions are always more safe for the child than posterior dorsal positions. Therefore, as soon as the buttocks are born, if the child be coming in a posterior dorsal position, gradually turn it upon its longitudinal axis, so as to bring its back in front. During all this, if possible, have the uterus compressed externally by an assistant. With all the care you can exercise, with all the knowledge you may possess, and with all the assistance you can have

from others, these cases frequently are fatal to the child, even when you know that the child was alive up to the time of the umbilicus passing out. You will often be surprised to find that your case has not terminated as you anticipated. Do not promise too much. You may be mistaken in the result of your examination. You may be positive, during your examination with a cramped hand, that there are more fetuses than one. You may be sure that the two hands which you have felt, or the two feet that you have reached, are of different sizes, and belonging to twins, and when they come into the world you find one child only. The truth is that every one makes mistakes sometimes. If he does not, or if he says he never made a mistake, you may be sure of this — either he does not tell the truth, or he has had a very limited business.

When the child is born as far as the axilla, you must bring down the arms; and this is to be done, as I show you, by sweeping its hands over its face. Do not attempt to carry them the other way. If you do, there will be dislocation or separation of the epiphyses to look after. And now, which hand will you bring down first? No one can tell which will be the easier moved, except he be with the patient. In some cases I find the one which lies more anterior in the pelvis, sometimes the other, to be better. You can tell after a moment's examination.

And now for the head. Still have the external abdominal pressure kept up, so that the uterus may not relax, and so that the chin may be well forced down. Now is the time when the cord is the most compressed, and a finger in the mouth of the little one, if the vagina be well dilated and the perinæum drawn a little back, will allow it to gasp, perhaps, and to live for a minute longer than it otherwise would. Surely it has sometimes been the case that a minute of intra-vaginal gasping has saved a life.

A few words more of caution concerning your hurrying. What are you hurrying for? Not to save the mother. That was done when the breech passed into the world. You are hurrying to save the child. Be sure, then, that you do not kill it by pulling so hard as to dislocate its vertebræ, or even pull off its head. I remember a case in which this was done in this city many years ago. Remember the axis of the curve through which the child is passing, and do not pull the child forcibly forward against the pubes, nor too far backward against the sacrum. Remember also that by getting an assistant to put a finger into the vagina and to press back the perinæum, you will cut off a part of the curve and shorten the distance it has to come. If the head is retained when so far down, you can frequently disengage it by pressing a little backwards, and with one fore-finger pressing the chin a little to one or the other side.

REMOVAL OF A GREAT NUMBER OF CHERRY-STONES
FROM THE RECTUM.

BY WILLIAM H. WESCOTT, M. D., OF DORCHESTER.

IN July, 1875, I was called to see a boy about eight years old who had complained for several days of tenesmus, but had passed nothing, except occasionally a small amount of mucus tinged with blood. He had taken several doses of cathartic medicine, with no result other than severe griping and increased tenesmus. * The mother stated that she could not pass the nozzle of a syringe more than an inch into the rectum. I found the bladder enormously distended, and attempted at once to introduce the catheter, but its course was suddenly arrested.

Upon passing a finger into the rectum I found it distended with an unyielding mass of cherry-stones, filling the whole pelvic cavity and pressing the urethra against the pubic arch. The cherry-stones were so firmly glued together that it was quite difficult to separate them by the finger. After about one hundred of the stones had been removed, one by one, by means of ordinary dressing forceps, the boy passed a large quantity of urine. Palpation discovered numerous masses of the stones in the large intestines.

The next morning the rectum was packed quite full again, and the boy could not pass his water. I administered ether, and removed all the stones within reach. The boy soon urinated, and about an hour later had a movement of the bowels, passing many more stones, which were not preserved. After a few days the boy was quite well.

The case was reported some time ago to the Boston Society for Medical Improvement, and the stones, which were then exhibited (measuring six ounces and six drachms), have been sent to the museum of the medical college.

THE NEW BATTERY FOR ELECTROLYSIS OF UTERINE
FIBROIDS.

BY S. G. WEBBER, M. D.,

Clinical Lecturer on Diseases of the Nervous System in Harvard University.

THE battery described in last week's JOURNAL differs very materially from those usually employed for electrolysis. It is exactly the opposite of what is generally recommended, and if used in some cases in which it is desired to produce electrolytic action might lead to failure, or even to an unfortunate fatal result. It would probably be far from safe in aneurism of the aorta. As the article is unfortunately calculated to mislead those who are not familiar with the use of electricity, and as failure might discourage the further use of electrolysis, it may be well to review briefly the subject.

In all batteries there is a certain amount of resistance, depending upon the metals and liquids of which the battery is formed. For each cell, so long as the metals are the same and the liquid retains the same composition, this resistance is the same.

When the battery is in use there is a resistance external to the battery; this resistance in medicine is generally compound, consisting of the resistance of the conducting wire and electrodes and of the resistance of that portion of the body included between the electrodes. The resistance of the body is so great that that of the conducting wire may be disregarded; also that of the battery is comparatively nothing.

Without undertaking to give an explanation of Ohm's law, it will be sufficient to refer to a deduction from it. Moyan¹ states this briefly: "Is the extra-batterial resistance very small, then we should use as few and as large elements as possible; whereas, is this resistance great, then many and small-sized elements are required." Several other authors give essentially the same. J. Rosenthal² gives the same deduction in nearly the same terms. Cyon³ gives it rather more at length. He also adds that as the resistance of the human body is so very great that the resistance of the element may be neglected, the surface of the elements is of no consequence when they are used for therapeutic purposes; the intensity of the current is determined solely by the number of the elements. On the contrary, when used for galvano-cautery the resistance of the element is almost alone to be considered; consequently the number of the elements will not increase the intensity of the current; this will be done by increasing the surface of the elements.

In Miller's Chemistry is found the following statement: "It may be concluded that when the exterior resistance is trifling, as usually occurs when the circuit is metallic and not of very great length, little or nothing is gained by employing a large number of cells; but that when a considerable chemical resistance is to be overcome, power is gained by employing a series numerous in proportion to the resistance so introduced."

The resistance of distilled water compared with that of metals is enormous, being more than six thousand million times that of silver; solutions of different salts conduct better than pure water, but are vastly inferior to metals. The conducting power of animal tissues bears some proportion to the amount of fluid they contain; the resistance is many million times greater than that of copper wire. Hence it will be seen that to send a current of electricity through a layer of water for the purpose of decomposing it, that current must have great intensity to

¹ *Electro-Physiology and Therapeutics*, page 70, New York, 1868.

² *Electricitätslehre für Mediciner*, page 73, Berlin, 1869.

³ *Principes d'Électrothérapie*, par le Dr. E. Cyon, page 37, Paris, 1873.

produce the desired action. The extra-bacterial resistance is so great that all other resistance may be neglected.

In ordinary cases of electrolysis of tumors, the best result would be obtained, then, by having many cells of moderate size; nearly all authors agree in this regard. Frommhold, in considering electrolysis, says,¹—

“A most important point in electrolysis is the dimension, the amount of surface, of the elements. It is especially desirable, yea, absolutely imperative, to exclude as far as possible every thermic influence which is dependent upon large surfaces, upon large elements. . . . Elements with small surface give no thermic action.”

He then supposes three batteries constructed with the same amount of material. “The first battery contains only six elements. . . . Such a battery is to be used only for galvano-cautery, on account of its great thermo-genetic power.

“The second battery, of twenty elements, gives a current of middle power, useful for therapeutical purposes.

“The third battery, with sixty elements of small surface, works with its greatest intensity electro-chemically, decomposing, destroying. . . . Having only the slightest thermic effect, this peculiarly intensity-current will cause not only coagulation and fluidizing, according as one or the other pole is used, but also by using both poles will so far destroy the malignant tumor in its texture that its specific nutrition must cease.”

Dr. Victor v. Bruns says,² “To obtain greater electrolytic effects, galvanic batteries can be used which are composed only of twenty, thirty, forty, and more elements of small size; according to the law that to obtain powerful electrolytic effect the non-essential resistance in the interpolated connecting circuit must be proportional to the essential resistance in the elements.”

Dr. Cutter has, however, obtained good results with his battery in treating uterine fibroids. As he states that “it is an open question whether the galvanic current has anything to do with” the result, and as he makes no mention of having used other batteries with many small elements, it remains an open question also whether as great or greater benefit might not have been obtained with a battery better fitted for electrolysis.

On one important point there seems to have been an omission. The exposed portions of the electrodes should always be within the substance of the tumor, otherwise electrolysis of the healthy tissues and perhaps of the peritoneum would be produced. If the electrodes penetrate the tumor to such a depth, the galvanic current cannot exert any “peculiar

¹ *Electrolysis und Elektrokatalysis*, 1874.

² *Die Galvano-Chirurgie oder die Galvanokaustik und Elektrolysis bei chirurgischen Krankheiten*, page 112, Tübingen, 1870.

power in preventing the ordinary results of abdominal traumatic inflammation." Such inflammation rarely follows the tapping of an ovarian cyst.

One author has used batteries constructed somewhat like the one recommended by Dr. Cutter. Dr. Groh¹ is the only one whom I have found who advises their use provisionally, and he limits it to cases where there are tumors of a large mass, under which head uterine fibroids would come. After mentioning the use of batteries with elements of small surface, he says, "The experiments which I made with batteries constructed for galvano-cautery, quantity batteries, lead me to hope that they can also be used with advantage for electrolysis; that we may be able to destroy rapidly, and that therefore the pain excited may be much less than with the same action from an intensity battery."

It is generally objected to elements with large surface that the chemical action is less, while the thermic effect—a real galvano-cautery—is more marked. From my experience at the bedside I do not fully share this opinion.

Then, in cases in which it is desired merely to destroy as quickly as possible large masses, there need be no particular fear of the thermic action, since practically it is immaterial whether the desired object is obtained by the electrolytic power of the current or by the heat also generated, provided the thermic action will not injure neighboring tissues.

Unfortunately Dr. Cutter has not mentioned the number of his fatal cases, nor the symptoms in such cases which might assist in forming a judgment as to the causes of failure, and be a guide against future accidents.

SALICYLIC ACID IN ACUTE RHEUMATISM.²

BY CHARLES P. PUTNAM, M. D.

THE JOURNAL for February 10th refers to the lately published cases of rapid recovery from acute polyarthritic rheumatism with salicylic acid. The following case is quite as striking as Traube's.

Alice B., five years old, was thoroughly chilled while skating on February 5th, and for several days after had a hot skin, a coated tongue, and no appetite. On the 9th she lay on the bed most of the day. On the 10th she remained in bed. On the 11th, in the morning, her pulse was 120, her temperature (axillary) 102.7°. In the evening, pulse 131, temperature 103.5°. During the latter part of this day she complained much of pain in the muscles of the thigh, in the groin, and in the ankles. She would not move her lower extremities, and could

¹ Die Elektrolyse in der Chirurgie. Wien. 1871.

² Reported to the Boston Society for Medical Improvement.

be moved only with great pain. Skin dry. No swelling nor redness of any joints or of other parts of the body. On the 12th the general state was as before; pulse 120, temperature 103°. During the day the hands became painful and sensitive, and the knuckle-joint of the third right-hand finger was slightly swollen and rose-colored.

On the 13th, pulse 130, temperature 102.7°. She had slept somewhat, with five grains of Dover's powder, but the pain and tenderness of the extremities had increased very much, so that the patient lay quite helpless, cried out when touched, and was moved only with the greatest difficulty. Most of the joints of the hands and feet, especially the joints between the first and second phalanges of the right hand and foot, were swollen and rose-colored. Movement of the jaw also caused pain.

Salicylic acid was prescribed, five grains in wafers every hour when the patient was awake. The treatment was begun at two P. M., and eleven doses, making almost one drachm, had been given at ten A. M., next day. No tinnitus aurium was observed by the patient. After the first three doses there seemed to be some improvement, for though the physical appearances remained unchanged, the patient's spirits were better.

After the seventh dose she went to sleep, and was quiet most of the night, only waking often enough to take two more doses. In the morning she turned over in bed, moved the bedclothes with her hands, and wanted to be dressed.

On examination it was found that the redness had left all the joints; they could be moved without pain, and only a moderate œdematous swelling marked the affected parts. The patient complained only of slight itching of the hands and face.

At ten A. M., pulse 120, temperature 101.6°. At six P. M., pulse 124, temperature 102.4°. Five grains of salicylic acid were ordered every two hours during the night, but only three doses were given, as the patient seemed quite comfortable, and slept. On the 15th (forty-eight hours after treatment began) the temperature was 99.9°.

RECENT PROGRESS IN OBSTETRICS AND GYNÆCOLOGY.¹

BY W. L. RICHARDSON, M. D.

GYNÆCOLOGY.

Ovariectomy. — Professor Schroeder has recently taken exception to Dr. Sims's method of establishing a drainage of Douglas's cul-de-sac after ovariectomy. He agrees with Dr. Sims that the majority of deaths after the operation are due to septicæmia, but he does not believe

¹ Concluded from page 187.

that the reddish serous exudation in the peritoneal cavity is necessarily the cause of the septic poisoning. As a rule, transudations and exudations in the abdominal cavity have no tendency to decomposition and the production of septicæmia. As a proof of the correctness of his views, Professor Schroeder cites two cases in which a fatal result from tetanus followed the operation, and in both of which an abundant reddish serous transudation was found in the abdominal cavity; yet in neither were there any symptoms during life of peritonitis. In other cases, wherein the injury to the peritoneum has been very slight, the most marked symptoms of septic peritonitis follow. The difference in these cases he considers to be due to the exposure or non-exposure of the patient to infection. When there has been no infection, the peritoneum absorbs the exudation; while in cases of infection, either the exudation decomposes, or, in cases in which no exudation has taken place, the peritoneum inflames and gives rise to the exudation, and this rapidly decomposes.

It is of course evident, if this view be the correct one, that the object of the attending surgeon should be to prevent infection, rather than to secure the removal of a fluid which without infection is innocuous. In cases in which an infection has taken place, and a decomposing exudation exists in the abdominal cavity, drainage should be at once resorted to. It is extremely difficult, however, to puncture the cul-de-sac of Douglas unless an exudation be inclosed within it; and in these cases puncture is unnecessary, since there can be no danger of absorption or perforation if the exudation is incapsulated. A free exudation in the abdominal cavity does not push forward the posterior vaginal cul-de-sac. The best method, when drainage must be established, is to perform laparotomy, and subsequently to make a puncture of Douglas's cul-de-sac from within, thus allowing the abdominal cavity to be easily washed out.

Dr. Hillas reports¹ a case in which he operated upon a patient in the Ballarat District Hospital, for the removal of a right ovarian tumor. When the peritoneum was opened, not only was a large ovarian tumor, holding eleven quarts of fluid, discovered, but a gravid uterus at about the eighth month of pregnancy was found. This latter had been accidentally incised by the knife of the operator. The ovarian tumor was tapped, and the pedicle secured by a clamp and divided. Recognizing the fact that, owing to the wounding of the uterus, labor must shortly begin, and that probably a rupture of the uterus at the point of injury would occur, it was deemed advisable to perform Cæsarean section. Accordingly, an incision was made, and the fœtus, alive and well developed, was removed with the placenta. The wound in the uterine wall was closed with silver sutures, as was also the abdominal opening.

¹ Australian Medical Journal, February, 1875.

The patient vomited for about forty-eight hours after the operation. Great relief from this symptom followed the administration of morphia and ice, and by the fourth day the patient was pronounced comfortable. A discharge of pus from the lower part of the wound followed, but the incision was completely closed within fourteen days. The patient was discharged from the hospital at the end of the sixth week. A month after the operation, she menstruated for four days, and when last seen was in perfect health.

Dr. T. Gaillard Thomas gives a most interesting account¹ of a case in which he performed a double ovariectomy for the removal of solid ovarian tumors. The patient was a married woman, thirty years of age, and the mother of two children. Seventeen months before the operation, she was confined with her second child. Since that time she had been steadily failing, and within the last six months rapidly emaciating. The menstrual discharge had been absent for three months, and the patient complained of some neuralgic pains about the lower part of the abdomen. A physical examination showed a round, hard, immovable tumor, which occupied Douglas's pouch, and filled the upper part of the sacral concavity. A large abdominal tumor could also be felt, extending about three inches above the umbilicus. As the patient was rapidly failing, ovariectomy was performed, and a large, solid tumor, measuring nineteen inches in circumference and weighing four and a half pounds, was removed. An examination showed that the left ovary also was diseased, though to a much less extent, and accordingly it was removed. This latter measured twelve inches in circumference, and weighed one and one half pounds. During the next thirty-six hours all went on well. A profuse uterine hæmorrhage then came on, which recurred about twelve hours later to such a degree as to require the use of a vaginal tampon.

The next day, the patient was evidently sinking from sheer exhaustion. Both the stomach and the rectum ejected all nourishment. It was decided on consultation to try transfusion, and accordingly Dr. Thomas determined to perform the operation, using, however, instead of blood, pure fresh milk. He slowly injected, by means of Colin's transfusion apparatus, eight and a half ounces of fresh milk into the median basilic vein. As soon as about three ounces were injected, the pulse became very weak and rapid, and the patient complained that her head felt as if it would burst. By the time, however, that the whole amount had been injected, she was perfectly quiet. An hour later, she had a decided rigor, the pulse rose to 160, and the temperature to 104°. A few hours later, this high temperature fell, and the patient slept.

The next morning the pulse was 116 and the temperature 99½°; and the patient declared herself decidedly better. During the next twenty-

¹ American Journal of the Medical Sciences, January, 1876.

four hours, iced milk and lime-water in small amounts were given by the mouth, and retained. The patient rapidly convalesced, and on the twenty-first day after the operation walked down-stairs. Six weeks later, the patient pronounced herself entirely well.

Menorrhagia. — Dr. N. G. de Mussy reports¹ the details of two cases in which almost immediate relief from a profuse menorrhagia followed the application of bags of hot water to the lumbar region. In the first case some pelvic adhesions were noted on the right side of the uterus, and some ovarian tenderness. Within twenty-four hours after the application of heat as described, the flow was materially diminished, and in two days it wholly ceased. Within two days after, the patient complained of pain in the head, and suffered from a severe attack of dyspnœa and a slight hæmoptysis. All these symptoms ceased, however, within nine or ten days. With the return of the flowing, at the next catamenial period, the heat was again applied, and was followed not only by a cessation of the flowing, but also by the same unfavorable symptoms above alluded to. The menorrhagia subsequently returned, but in decidedly less quantity.

The second case was one in which a miscarriage had probably taken place about two months before. The use of the hot application was followed by an arrest of the hæmorrhage, but the patient complained of a feeling of very great fullness of the head, and several times came near losing consciousness. The menorrhagia was, however, permanently relieved.

Dysmenorrhœa. — Dr. Finkel reports² the results of an examination of seven specimens taken from four different patients who suffered from so-called membranous dysmenorrhœa. The membranes were in all the cases unmistakable casts of the uterine cavity. Sometimes small fibrous villi were seen on their external surface. They were formed either by the entire mucous membrane with glands, or by its upper surface only. They consisted of a mixture of glands, vessels, connective tissue, granulation-cells, and particles of fibrine. In all the patients the uterus, which was generally enlarged, was displaced.

The disease is evidently an endometritis, which is characterized by the accumulation of numerous granulation-cells in the mucous membrane and sub-mucous tissue, the elements of which are separated and raised by the cells. An abundant effusion of blood takes place into the deeper layers of the mucous membrane, and thus assists the process. The whole is finally detached and thrown off as a foreign body. It is to the acid action of the vaginal and uterine mucus that the amyloid degeneration noticed in them is due.

¹ *Annales de Gynécologie*, July, 1875.

² *Centralblatt für die medicinischen Wissenschaften*, No. 44, 1875.

Dr. Drysdale¹ protests against the tendency, which exists in certain branches of the profession, to attempt to explain all cases of dysmenorrhœa by the supposed existence of some physical cause. He claims that surgical interference rarely proves serviceable in this class of cases, while the occurrence of pelvic abscess or pelvic peritonitis, as the result of such operations, is not at all uncommon. The vast majority of cases are, in his opinion, to be accounted for as having their origin in neuralgia or spasm. Frequently, membranous shreds will undoubtedly obstruct the ready escape of the catamenial flow. He considers that the rational treatment of dysmenorrhœa is to be found in the use of cold baths in the morning, followed by short walks in the open air; in hot baths, which should be begun a few days previous to the expected commencement of the menstrual discharge, and in the administration of palliative remedies during the actual occurrence of the pain. Sometimes these cases are cured at once by marriage, but in other cases no such relief is experienced.

Nitric Acid as a Caustic. — Dr. James Braithwaite calls attention² to the great value of nitric acid as a caustic in uterine practice. The action of nitrate of silver is too fugitive in its nature. Its influence seldom extends beyond five or six days. It is really a stimulant rather than a caustic, and, as such, frequently causes more or less hæmorrhage. Its action is very superficial and therefore, as a caustic, very imperfect. The use of potassa cum calce is often followed by serious results, owing to its spreading to neighboring parts and to the great depth to which its caustic action extends. The salts of mercury are liable to be followed by symptoms which affect the whole system.

Nitric acid, however, has none of these disadvantages. It is an agent always at hand. Its use produces little if any pain, and no hæmorrhage. The eschar made by it separates very slowly, and the resulting sore is one which shows a great tendency to heal. The fresh mucous membrane is not cicatricial in appearance, and, when healing is going on satisfactorily, has a sharply defined edge. The contraction is greater than that which follows the use of any other caustic, and by this very contraction of the formerly relaxed tissues a permanent cure is often effected. The acid should be applied by means of a small and tightly-rolled piece of cotton-wool. It should never be applied within the cervical canal unless that canal is open. In a series of over forty cases, the results obtained by the use of this agent far exceeded those which followed the use of any other caustic.

Dr. Leblond³ recommends the use of crayons of iodoform in cases in which there exist superficial ulcerations of the cervix uteri extend-

¹ *Obstetrical Journal of Great Britain*, October, 1875.

² *British Medical Journal*, November 13, 1875.

³ *Annales de Gynécologie*.

ing more or less into the uterine cavity. These crayons are made by rubbing together powdered iodoform and mucilage; the mass is then thickened by the addition of gum arabic, after which it is allowed to harden by exposure to the air. The crayons can be introduced within the cervix, and held in position by a tampon of cotton.

Fissure of the Neck of the Bladder.—Professor Spiegelberg contributes¹ a valuable article on this troublesome and painful affection. The pain and spasmodic contractions of which the patients complain are much more constant in this disease than in cases of fissure of the anus, inasmuch as the urine is in almost continual contact with the abraded surface. The occurrence of a vesical fissure, like that of the anus, frequently follows a confinement. The method of treatment which has been chiefly recommended in this class of cases consists in a gradual dilatation of the parts, but not unfrequently this treatment, while it cures the fissure, is followed by a subacute inflammation of the mucous membrane, and by incontinence of urine, which is certainly as troublesome as the fissure was painful. With a view of avoiding these difficulties Spiegelberg advises a rapid dilatation of the urethra, the patient being always first placed in a state of anæsthesia. By means of Busch's uterine dilator, the upper part being removed, the dilatation can be perfectly effected in about a minute, and the urethra can thus be dilated to the extent of about an inch. The dilatation should be at first moderate, considerable force, however, being finally used. Spiegelberg gives the details of two cases of vesical fissure which he treated in this way successfully. The same method of examination can also be used in all cases where the physician desires to make out a diagnosis of any suspected local trouble in the course of the urethra. In this same way he has removed a polypus from the neck of the bladder. By the employment of this method of examination all possibility of confounding a case of vesical fissure with a cystitis, urethritis, or simple neurosis is avoided.

TRANSACTIONS OF THE PHILADELPHIA PATHOLOGICAL SOCIETY.²

THE present volume by no means yields to its predecessors in matters of general interest. It furnishes a striking picture of the inner medical life of Philadelphia, and indicates in the strongest possible manner one of the causes of the maintenance of the deservedly high position in American medicine so long held by that city.

The general arrangement of the contents is the same as in previous vol-

¹ Berliner klinische Wochenschrift, xxii. 16, 1875.

² Transactions of the Pathological Society of Philadelphia. Volume V. Edited by JAMES TYSON, M. D. Philadelphia: Printed for the Society by J. B. Lippincott & Co. 1876.

umes, while the reports are more full. A greater number of specimens is included than in the preceding volume, though the meetings extend over but one half the time. That the interest in the subject is a growing one is thus very strongly shown, and the members of the society may well take pride in the results of their efforts. It is also gratifying to see the thorough interest displayed by the younger men, for most of the truly active members are apparently those who have been admitted since 1860.

Among the rarer specimens is that of Dr. Cleeman, "a congenital imperforation of the duodenum and absence of the gall-bladder." The child was otherwise well formed, and died in five days, from exhaustion. Of other cases of congenital disturbance, the atresia of the vagina, presented by Dr. Schell, has a double interest. The patient was an adult, thirty years of age, in whom there was no external vaginal opening. The dilated vagina held nearly a quart of retained menstrual fluid, but the uterus was not affected. The manner of death from rupture of the vagina and escape of its contents into the peritoneal cavity is of marked practical importance. The admirable report of the special committee to which was referred the imperfect cyclops is an instance of the thoroughness with which the society's work is done.

The specimen of intussusception presented by Dr. Sinkler is a valuable contribution to the ætiology of this condition. The cancerous cæcum was carried into the transverse colon. There is no reference made to the structure of this tumor. If actually a cancer, it would represent one of the rarer tumors serving as a cause for invagination. Adhesions and infiltrations of the surrounding tissues are so likely to form in connection with cancerous cæca that the latter are usually held firmly in position.

The microscopic section from the kidney of a case of hæmaturia, shown by Dr. J. G. Richardson, suggests features in common with those presented by the series of cases reported by Dr. W. S. Bigelow in the *JOURNAL*, some time since. If we remember aright, Dr. Bigelow was unable to observe distinct red blood-corpuscles in the renal tubules, the appearances being regarded as due to amorphous hæmoglobine, as in the hæmoglobinuria of Pontick.

As a suggestive diagnostic point in the examination of abdominal tumors, Dr. H. L. Hodge calls attention to the power of transmitting sound possessed by a fluid whose chemical and microscopic examination indicated that it came from a cyst of the broad ligament. "Upon auscultating the abdomen of this patient, the gurgling of the intestines could be distinctly heard in front, where the sound on percussion was dull. In other cystic dropsies of the abdomen I have not noticed this symptom. It may possibly prove of value in detecting the existence of cysts of the broad ligament, and in distinguishing them from other collections of fluid."

We had supposed with Dr. Bertolet that the specific cancer-cells were "things of the past," and were not a little interested in the discussion concerning Dr. Mears's ovarian tumor, the gross appearances of which correspond with those of a papillary cystoma. Notwithstanding the difference of opinion manifested during the discussion concerning the diagnostic value of cancer juice, it could hardly have been closed more fittingly than was done by Dr.

Pepper, the president of the society: "It would seem as though much of this discussion turned upon the precise classification adopted for tumors and neoplasms. It is of course well known that this has varied much at different times, and notably since the earlier writings of Paget. There can be no doubt that the latter observer and others of his school very frequently made a correct diagnosis of cancerous growths, so called under their classification, because the character of the expressed juice and particularly the cell-forms it contained formed an important feature in the characteristics of cancer. But at the present time there exists an almost unanimous disposition to accept the classification of recent writers, in which cancer occupies a perfectly definite place, not in the least dependent on the character of juice that can be expressed from a cut surface, nor on the cell-forms present, but upon certain definite anatomical relations and arrangements of cells and intercellular stroma. According to this latter view it is, of course, necessary to employ the mode of examination which alone will afford a demonstration of these relations; and it is evidently impossible that a diagnosis can be made from the examination of fluid."

Dr. Duhring's examination of a specimen of angioma of the skin has an additional interest in connection with the more recent suggestive generalization of Durante concerning the recurrence of *nævi*. From those possessing a structure in which connective tissue predominates sarcomas are likely to result, while carcinomas follow *nævi* of a more epidermoidal character.

The communications of Dr. R. M. Bertolet, on Multiple Cavernous Angioma of the Liver, Tubercular Ulceration of the Larynx and Trachea, and Sclerosis of the Spinal Cord, deserve special commendation for their evident thoroughness. They are characterized not only by a careful and critical examination of the specimens, but also by an extensive research into the recent literature of the subjects.

Dr. Keen's paper on The Anatomical, Pathological, and Surgical Uses of Chloral is included among the miscellaneous contributions. That the seed thus sown was not without its fruit is evident throughout the volume, from the numerous allusions to corroborative experiments.

The committee on morbid growths has faithfully attended to its duties, and, as heretofore, has added largely to the scientific value of the Transactions. The use of the term "amyloid degeneration" of muscular fibre might be objected to as likely to confound the condition with a well-recognized and well-established form of degeneration. We should also question the propriety of designating a sarcomatous degeneration of striated muscular fibres as a myosarcoma. We are not aware of any authentic instances of an acquired sarcoma being composed of voluntary muscle, and the statement of the results in this instance is by no means sufficient to establish the existence of a unique case.

We are able to note merely a few of the interesting features of this publication. The general reader may be somewhat dismayed at seeing so much condensed information, yet there are not a few persons who find it easy to become absorbed even in a library catalogue. There is no intention of suggesting an analogy, as the Transactions are decidedly cyclopaedic.

A classified table of contents and an alphabetical index render efficient service to those who are willing to be attracted as well as to those who seek for definite information. We hope Dr. Tyson may long continue in such productive editorial work.

R. H. F.

CARPENTER'S PHYSIOLOGY.¹

A NEW edition of this well-known text-book is before us. In its preparation the same plan has been followed as in previous editions, that is, the results of recent investigations have been introduced into their appropriate places in the text or in foot-notes. A work which grows thus by what may be called an "agglutinative" process (particularly if, as in this case, the editor is not the original author), necessarily becomes less and less readable as the unity of the plan is gradually lost. Besides this defect, the present volume has that of very unwieldy proportions, and it is rather unfortunate that the 1176 pages were not divided between two volumes, a proceeding which the editor suggests will probably be necessary in future editions.

In spite of these objections to the form of the work, it will undoubtedly retain the high place which it has always held amongst text-books of physiology. It now represents very fairly the present state of our knowledge of human physiology, and with its numerous references to original investigations it is, without doubt, for special students of that science the most valuable work of the sort in the English language.

H. P. B.

BLACK'S LECTURES ON BRIGHT'S DISEASE.²

In this little book of lectures we have a fresh and vigorous study of a subject which is full of interest. The author is a man of positive ideas, and his modes of expression are unequivocal if not dogmatic. A single quotation from the opening lecture will illustrate this prominent characteristic of the book: "Men of scientific pretensions take certain particles of *dead* animal matter, place them possibly in four-and-twenty bottles, and watch the influence upon them of four-and-twenty different solutions called antiseptic, and forthwith rush to conclusions regarding the value of the so-called antiseptic surgery or medicine of modern times, relatively to the complicated mechanism of the *living* body! I have no sympathy, then, for this penchant after 'original investigation' on the one hand, and I have learned to attach little importance to much that is designated 'experience' on the other." It is to be remarked, however, that the conservative skepticism here manifested so emphatically has not deterred the author from a studious examination of the works of many "original investigators," whose results are analyzed and criticised with great acumen, and are often made to fortify his own opinions.

¹ *Principles of Human Physiology*. By WILLIAM CARPENTER, M. D. Edited by HENRY POWER, M. B. Lond. Eighth Edition. Philadelphia: Lindsay and Blakiston. 1876.

² *Lectures on Bright's Disease: Delivered at the Royal Infirmary of Glasgow*. By D. CAMPBELL BLACK, M. D., L. R. C. S. Edin. Philadelphia: Lindsay and Blakiston. 1875.

The first part of the book is devoted to the anatomy and physiology of the kidneys. Both these interesting topics are treated comprehensively. The author's theory of the secretion of the urine is summarized thus: The watery portion transudes through the thin wall of the Malpighian capsule, its saline constituents are separated by the cells lining the convoluted tubes, and the watery portion, in passing over the cells, appropriates their contents by a process of solution, dissolving at the same time the cell walls. In support of this theory the experiments of Heidenhaim are quoted; these experiments demonstrate that the aqueous and the solid constituents of the urine are eliminated in different parts and by different elements of the renal tissue.

The various topics relating to the recognized forms of Bright's disease (or cachectic nephritis, as the author prefers to designate it) are concisely yet clearly discussed. Among the subjects touched upon is the relation of renal disease as the local expression of a constitutional diathesis. Inordinate indulgence in alcoholic liquors is declared to be the most prolific cause of the affection.

The anatomical characteristics of the disease receive full consideration at the hands of the author, and the analogous changes found in other organs beside the kidneys are fully described.

In seeking to explain the cause of the so-called uræmic manifestations — convulsions, delirium, coma — the author does not favor Traube's view that they are due to cerebral anæmia, but he regards them as due to the presence in the blood of various extractive, imperfectly oxidized matters.

The clinical history and diagnosis of chronic nephritis are well delineated, and the chemistry of the urine in albuminuria is sufficiently defined. The size and character of the tube casts are described as having a weighty significance with relation to prognosis as well as to diagnosis.

In the discussion of the treatment of acute nephritis the author protests against the "fashionable waiting-upon-death of modern physicians," and boldly declares for the efficacy of general bleeding. At a later stage in the disease, when there are products of the primary inflammation to be removed from the renal tissues, mercury is the best remedy. Later still, counter-irritation over the loins by cantharides or by the actual cautery is recommended. To promote the vicarious elimination of the urinary constituents, the intestines are to be stimulated by cathartics, of which elaterium is preferred, and the skin is to be acted upon by baths, antimonials, and liquor ammoniæ acetatis. Diuretics are absolutely forbidden. We cannot but remark that as the section on treatment is the shortest, it is likewise the least satisfactory part of the work.

The book is embellished with many excellent wood-cuts, which serve to illustrate very clearly the author's text.

HOMCEOPATHY IN THE UNIVERSITY OF MICHIGAN.

IN a recent number of the JOURNAL we called attention to the annual report of the Michigan State Medical Society, wherein mention is made of an attempt to pass a resolution censuring the regents of the Michigan University for their action in relation to the homœopathic branch of the medical department. This effort to bring about an expression of opinion by the society on a subject which has excited much surprise and comment throughout the country met with an ignominious failure, and the resolution was tabled without discussion. We are therefore not surprised to learn that the faculty claim this action or rather inaction on the part of the society to be a practical indorsement of the course which they have seen fit to adopt. Under these circumstances we shall look forward with some interest to the meeting of the society this spring, on which occasion delegates to the American Medical Association will be selected. As this matter will undoubtedly receive the attention of the national association, the selection of delegates will probably be made chiefly with reference to this question, and can hardly fail to bring about a warm debate.

The principle involved is one which has influenced the profession so universally hitherto, in its attitude towards charlatanism, that any departure from it, even by a single university or state society, cannot fail to become a matter of general interest to physicians throughout the country. We cannot but regret, therefore, that the discussion of this question has been postponed by the society until the eleventh hour, and will then be held under the disturbing influences of an election involving other and opposing interests. The general spirit of reform which is now making itself manifest in the profession will, we trust, exercise a wholesome influence on this occasion, and a desire to act in behalf of the good name and welfare of medicine become paramount to all other interests.

We would remind the members of the Michigan Medical Society that the question which they will be called upon to discuss is not whether it is "a liberal policy" for the faculty of the university to tolerate the presence of "practitioners of a different belief," but whether they shall associate themselves with charlatans without rebuke. However indifferent American physicians may have been to standards of education and some other questions, there is one point upon which they have always held a pretty general and decided opinion, and we feel quite sure that "irregularities" of this kind will not be allowed to pass unnoticed.

CROUP AND DIPHTHERIA.

A PAPER by W. M. Welch, M. D., entitled Are Croup and Diphtheria Identical? is published in the *Philadelphia Medical Times* of January 22, 1876. The writer states that the most prominent pathological feature common to both of these diseases is the exudation which takes place upon certain portions of the mucous membrane. This membrane has been subjected to chemical and microscopical examination, with the hope of establishing the identity or duality of the two affections, but no very satisfactory result has yet been attained. Those

who advocate the separation of the two diseases believe that the affection of the mucous membrane in croup is usually less profound than in diphtheria. Obviously this distinction is one of degree rather than of a specific nature. The discovery of the presence of micrococci in diphtheritic membranes was supposed by Oertel and others to furnish a means of distinction between the diseases in question. They claimed that these organisms were never present in croup. But recent investigations have shown that the micrococcus may be found in abundance in inflammatory exudations and secretions, whether diphtheritic or non-diphtheritic. As far as the local appearances of true croup and of diphtheritic croup are concerned, Dr. Welch thinks we have no means of distinguishing between the two diseases. The sameness of anatomical changes does not necessarily establish the identity of the two maladies. In considering the ætiological and clinical aspects of the diseases it is found that age exerts an influence over the predisposition to both croup and diphtheria, but there is this difference: croup is especially a disease of childhood, rarely occurring after the tenth year. Diphtheria shows a preference to attack children, yet adults are not exempt from it. More males than females die from croup, while diphtheria seems to attack both sexes in like proportions. Cold, moisture, rapid alternations of temperature, and long-prevailing easterly winds are usually the meteorological characteristics of that country or season in which croup is most prevalent, while climate seems to exert no influence over the frequency or fatality of diphtheria. An impoverished condition of the blood, brought about by unfavorable hygienic surroundings, predisposes to the contagion of diphtheria, while croup attacks those of strong physical development. Of the general symptoms of diphtheria there are none which more certainly indicate the constitutional character of the disease than albuminuria. Although this is not a constant symptom, yet it is observed in a large proportion of cases — fifty per cent. or more. It is an important symptom, in connection with both the pathology and the prognosis of diphtheria. The early period of the disease at which it appears points to a rapidly developing general infection, and strongly indicates that the blood is the seat of the primary morbid process. The severity of an attack of diphtheria, according to Oertel, may generally be measured by the presence and amount of albumen in the urine. While it is true that albuminuria sometimes occurs in true croup, yet its presence is rare. Finally, the paralyses which frequently make their appearance during convalescence from diphtheria must be regarded as additional evidence of the specific and constitutional character of the disease. The facts disproving the identity of croup and diphtheria appear of much greater weight to the writer than those which are adduced on the other side of the question, and therefore lead him to conclude that croup and diphtheria are not identical.

MEDICAL NOTES.

— Evidence of the activity of the medical profession in the old town of Salem is given in the organization and successful carrying on of a hospital, which was opened October 1, 1874. A subscription of over seventy thousand

dollars was raised for the purpose, one gentleman, Mr. John Bertram, giving twenty-five thousand dollars. The building is of brick, and is three stories in height. It is divided into two portions, of which the western, containing twenty rooms, is used for the hospital, the eastern being rented. There are at present sixteen beds for patients, and the building contains all the conveniences which usually accompany a well-appointed hospital. As evidence of the usefulness of this charity we would mention that quite a number of both medical and surgical cases of importance have been under treatment, while in addition to an out-patient department an eye and ear clinic has been in active operation. We notice that the use of chloroform as an anæsthetic in the hospital has been forbidden.

Proposals made by the trustees to the secretary of the United States to treat sick and disabled seamen were accepted, and a number of sailors have enjoyed the advantages of the hospital.

The medical staff consists of four physicians and four surgeons. There is also an ophthalmic surgeon and an out-patient staff. Dr. Coggin is the admitting physician. In its general arrangement it resembles the "cottage hospitals" now so much in vogue in England. The expenses for the fifteen months ending with the beginning of the present year were about three thousand dollars. In a quiet and inexpensive way it is doing much good.

— In his monthly summary of the vital statistics of Providence for January, 1876, Dr. Snow, the registrar, remarks, —

"It is a popular idea that very mild weather in winter is very unhealthy. Let us examine this theory. January, 1875, was remarkably cold; January, 1876, was remarkably mild. The first January was colder, and the last warmer, than any corresponding month for many years. Let us compare the mortuary results. The deaths from some prominent causes in the two months were as follows: —

	January, 1876.	January, 1875.
Whole number of deaths.....	115	159
Pneumonia.....	15	35
Consumption.....	22	31
Croup.....	5	10
Bronchitis.....	1	6
Scarlatina.....	4	19

"This shows a large decrease in the warm January of the present year, not only in the whole number of deaths, but also, especially, in those causes of death which might be supposed to be influenced by the winter weather.

"This result agrees with my observation for many years past. Extreme cold, or extreme heat, if continued for a week or more, increases the mortality, while more temperate weather, whether in winter or summer, is favorable to health.

"The population of Providence, by the census of June 1, 1875, was 100,675. The mortality last month was, therefore, at the annual rate of only 13.7 in each 1000 of the population. In January, 1875, calling the population the same, the deaths were at the rate of 18.9 per 1000."

— The fifty-sixth course of the Medical School of Maine opened on Thursday, the 17th inst. Dr. John Lincoln, of the Board of Overseers, delivered

the opening address, which was a history of the medical school, with sketches of the more prominent deceased professors. It contained many very interesting facts relating to the history of the profession in New England, and we are happy to learn that it is likely to be published. The medical class will be the largest there has been for several years.

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CLINIC.

[SERVICE OF DR. S. CABOT.]

Fracture and Dislocation of the Ankle. — W. H. P., aged fifty-three, entered the hospital November 21, 1875. He had received the above injury eight days before his admission. The foot was dislocated backward upon the tibia, carrying with it the tip of the inner malleolus and the lower end of the fibula. The adjacent parts were much swollen and ecchymosed. By forcible extension and elevation of the foot and depression of the tibia the dislocation was finally reduced, but it instantly returned upon relaxing the pressure. An external side splint was applied, and after the dislocation had been reduced, the foot was suspended to a cradle by a sling under the heel, and a sand-bag was placed upon the lower end of the tibia. This held the foot well in place and was quite easily borne. The sand-bag was removed in six days, the foot being kept suspended by the heel for another six days. At the end of this time, no tendency to dislocation remaining, the leg was put upon an inside splint, and made a good recovery, the joint being freely movable when put into a dextrine bandage on December 21st, one month after the beginning of treatment.

The interest of this case, aside from the rarity of the injury, lay in the efficiency of this simple apparatus, which completely overcame a deformity usually very intractable, and not infrequently requiring division of the tendo-Achillis.

Depressed Fracture of the Skull. — E. V., a healthy man of thirty, entered the hospital January 19, 1876. One half an hour before his entrance he was thrown and run over by a horse, receiving a sharply depressed compound fracture of the skull on the right side of his forehead, just above and to the outside of the frontal sinus. When brought to the hospital he was in a semi-conscious state, with occasional slight hallucinations. He was easily roused to answer questions quite intelligently, though he remembered nothing of the accident. The pulse was 90, of good character. The pupils were somewhat dilated, equal, respondent. No paralysis was detected. The patient was etherized, and the opening in the skin was enlarged by a crucial incision. The edges of the hole in the skull having been trimmed off, the depressed fragments, which included both tables, were removed. One of the fragments of the inner table had made a minute puncture in the dura mater, through which there was a slight oozing of a clear fluid. Cold-water dressings were applied, and the patient removed to bed. During the first four days after the operation he was much troubled with vomiting and restlessness. The former was finally controlled by one grain of calomel after each act of vomiting, and the latter some-

what mitigated by full continued doses of bromide of potassium. An ice-bag was applied to the head; bread-and-milk diet was ordered, and the bowels, which were inclined to constipation, were freely opened.

On the third day after the accident the pulse was 116, the temperature 103.6°. The patient was restless, but conscious. On the fourth day he was slightly delirious, and in the afternoon noticed for the first time that his left arm was numb and powerless. The pulse was 104, the temperature 104.2°.

On the fifth day examination showed his left leg to be paralyzed, and his head drawn over to the right side. No paralysis of the face or pupils was detected. Temperature in A. M. 102.1°; in P. M. 103.8°.

On the morning of the sixth day the pulse was not so strong as before. The temperature was 103°. In the afternoon the patient seemed somewhat brighter; the pulse had gained in strength and was 108; the temperature was 102.2°. He was observed to move his left leg somewhat, and he continued to have some power over it till his death. A hernia cerebri was noticed forming during this day.

On the seventh day the hernia cerebri was about the size of the tip of the little finger. At 10.30 A. M. the pulse was 116, of fair character; the temperature was 102.4°. At about three P. M. the breathing, which had been quiet, suddenly changed its character, becoming much more rapid (44 to the minute), with a snorting inspiration. The pulse rose rapidly, reaching 172 at five P. M. The temperature rose simultaneously to 107.6°, and at 6.15 the patient died.

Autopsy, by Dr. Fitz, revealed the following conditions: On removal of the calvaria, which was intact, the dura mater was seen to be tense; when this had been removed, the inner surface of the right side of the membrane was found to be covered with a thick, greenish-yellow pus, somewhat inspissated. The pia mater, over the entire convexity, was distended tolerably uniformly by a purulent infiltration. The blood-vessels behind were uniformly injected. From the lower edge of the right frontal lobe, a soft, red, and somewhat shriveled mass, looking like a granulation, projected through a hole in the pia mater. The base of the brain was comparatively free from alteration. The ventricles contained no excess of fluid. The cerebral substance was soft and anæmic. On separation of the membranes from the base of the skull no fracture was found. The other organs presented nothing of interest.

Urethral Calculi. — E. M. S., aged thirty-two, entered the hospital November 16, 1875, with the following history. Seven years ago, after an attack of renal colic, he suddenly noticed difficulty in micturition, and on examining himself he felt, at the upper part of his scrotum, a hard lump, which he could push back and forth. Of late, since an attempt to remove it, it has become immovable. He has never suffered any pain, only inconvenience from obstruction to the flow of water.

He was etherized, and attempts were made with various instruments to remove the stone, which, though grasped, could not be drawn out on account of a narrowing of the urethra just anterior to it. During these attempts the stone partially broke, and was therefore crushed as far as possible, and left.

During the next two days the patient passed several small pieces, which, to-

gether with a considerable quantity of detritus, were estimated to be about equal to the stone previously felt in the urethra.

An analysis of the stone by Dr. Wood showed it to consist mainly of calcic oxalate, with a little calcic carbonate and phosphate, probably contained in the crust.

A. T. CABOT.

THE TREATMENT OF INSANITY.

MESSRS. EDITORS,—I have just received a note from a physician who is well known here as being one of the leading experts in mental disease in Great Britain, from which I take pleasure in extracting as follows: "I wondered, when reading *The Lancet* effusion, who would apply the *tu quoque* to us. The man did not know what he was writing about. It seems to me that the only way in which we are ahead of you is this: We run risks; you endeavor not to do so."

That is a very fair criticism on the treatment of mental disease in America. We try to be *too safe*. We sacrifice cures and the comfort of our patients to our fear of accidents. It is so easy to trust to a camisole, or bed-straps, or bars and bolts, that we do not take time to make careful and accurate diagnoses, and to discriminate as fully as we ought between patients who can be trusted and those who cannot.

C. F. F.

BOSTON, February 8, 1876.

A NEW AGENT FOR STAINING.

MESSRS. EDITORS,—I would like to call the attention of the readers of the JOURNAL engaged in microscopic research to a new material for staining, brought forward by Dr. Ernst Fischer in the *Archiv für mikroskopische Anatomie*.¹

The facts stated by Dr. Fischer may be condensed as follows: Eosine is a potash salt of tetrabrom-fluoresceine. For staining, an aqueous solution, in the proportion of one part to ten or twenty, should be prepared; of this a few drops may be added to a watch-glass full of alcohol or water; in from ten to twelve hours (often in a shorter time) the specimen may be removed and washed in alcohol or water.

If acids are added to the eosine in solution, the latter is decomposed, and free eosine coloring matter is precipitated; this precipitate may be filtered out and used for forming a solution in absolute alcohol (one part to twenty or thirty); a few drops of this solution added to a watch-crystal of alcohol form the staining fluid. The free eosine coloring matter is soluble in strong alcohol, in ether and chloroform (with the addition of a little alcohol), and very slightly in water.

Preparations which have been hardened in "Müller's fluid" are colored best in the alcoholic solution of the free eosine coloring matter. If eosine is used, the chromic acid of the bichromate of potash precipitates the free coloring matter. If it is desirable to use the eosine, the acid must be neutralized by the use of alkalis. Mold does not form on the solutions of eosine. Mus-

¹ Band xii., heft ii.

cular fibre, particularly the striated, is intensely colored; the axis-cylinder of medullary nerve-fibres is colored a fine rose-color, while the medulla remains colorless; ganglionic cells and their processes take the color slightly, but are well defined in the deeply-colored surrounding tissue; blood-vessels and capillaries are rendered easily perceptible in most tissues; blood-corpuscles take a dark brown color; in organs that have undergone amyloid degeneration the amyloid substance takes a light red color. Fresh preparations are nicely colored in the alcoholic solution, and can thus be hardened and colored at the same time.

Those who would like fuller details as to the chemistry of eosine than those given by Dr. Fischer may refer to *The Chemical News*.¹ Any one who has attempted the purpurine staining, as recommended by Ranvier, and who has succeeded as poorly as I have with it, will be pleased with the new staining material. I have made use of the alcoholic solution of the free eosine coloring matter with preparations that have been hardened in "Müller's fluid;" it gives very transparent specimens, and is not so vexatiously uncertain in its preparation and use as carmine, purpurine, and other red staining fluids. In decomposing the eosine, muriatic acid was used, and although the precipitate was not washed after filtration, I experienced no difficulty in obtaining good results; it will be a most valuable addition to our list of red staining fluids if the color holds well.

Very respectfully,

D. HUNT.

BOSTON, February 8, 1876.

THE OFFICE OF CORONER.

MESSRS. EDITORS,—I have been in hopes that some one would answer your correspondent of January 13th upon the coroner question. In my opinion a great many reforms are needed in regard to the whole question, and as one of the coroners of this city I hope your correspondent will push forward the reform until better men fill the office and better laws govern them. Many of the quacks of Boston (with long names and short) fill the position at present, to the discomfort, to say the least, of those who are trying to be more honest.

A coroner is not called in simply to determine the cause of death, but to decide, according to the facts he can gather, whether or not violence has been done. The present laws do not allow him, save at his own expense, to make a post-mortem examination, unless an inquest has been ordered; and the authority to hold an inquest will be given only when there is clear evidence that some violence has been done. Many times a post mortem would show some proof of violence where at present the case has to go on record as heart-disease, etc.

With regard to juries that have to be summoned in a hurry, often from a surrounding crowd, the power is generally left entirely with the constable; so that men of all sorts are gathered, and often, as your correspondent says, they are most ignorant men. A reform in this direction is much needed. As much care should be taken in the selection of coroners' juries as of those who try cases of murder.

¹ Vol. xxxii., No. 830.

While on this subject, some things might be said regarding certain coroners "hanging on" by telegraph and otherwise to police stations and city hospitals. Of all the coroners of the city of Boston, some of them good men and true, only three or four are ever heard of as holding inquests or views. Great reform is needed somewhere.

REFORM.

Boston, February 19, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING FEB. 12, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	610	30
Philadelphia	800,000	343	22
Brooklyn	500,000	242	25
Boston	342,000	178	27
Providence	100,700	35	18
Worcester	50,000	21	22
Lowell	50,000	15	16
Cambridge	48,000	24	26
Fall River	45,000	11	13
Lawrence	35,000	12	18
Lynn	33,000	13	21
Springfield	31,000	7	12
Salem	26,000	8	16

Normal Death-Rate, 17 per 1000.

BOOKS AND PAMPHLETS RECEIVED. — *Inhalation in the Treatment of Disease: Its Therapeutics and Practice.* By J. Solis Cohen, M. D. Second Edition, revised and enlarged, with many new Illustrations. Philadelphia: Lindsay and Blakiston. 1876. (For sale by A. Williams & Co.)

Atlas of Skin Diseases, consisting of a Series of Colored Illustrations, together with Descriptive Text and Notes upon Treatment. By Tilbury Fox, M. D., F. R. C. P. Parts I., II., and III. Philadelphia: Lindsay and Blakiston. 1876. (For sale by A. Williams & Co.)

Illustrations of Clinical Surgery, consisting of Plates, Photographs, Wood-Cuts, etc., illustrating Surgical Diseases, Symptoms, and Accidents; also Operative and other Methods of Treatment, with Descriptive Letter-Press. By Jonathan Hutchinson, F. R. C. S. Philadelphia: Lindsay and Blakiston. 1875. (For sale by A. Williams & Co.)

A Manual of General Pathology, for the Use of Students and Practitioners of Medicine. By Ernst Wagner, M. D. Translated from the Sixth German Edition by John Van Duyen, A. M., M. D., and E. C. Seguin, M. D. New York: William Wood & Co. 1876.

Annual Report of the Directors and Medical Board of St. Michael's Hospital, Newark, N. J. 1876.

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SURGICAL CASES.¹

BY H. H. A. BEACH, M. D.,

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Dislocation of the Tendon of the Peroneus Longus Muscle. — This accident occurred to a young lady while walking in the street, and did not completely disable her. On reaching home she removed her shoe and stocking, and found on the outer side of the ankle what she supposed to be a bone that could be slipped in and out of place without pain. She consulted me a few weeks after, when, upon examining the foot, I found that the tendon of the peroneus longus could be easily displaced forward from the groove in which it usually lies, on to the external malleolus, where it could be plainly felt beneath the skin. The tendon was as easily replaced as it was dislocated; but if the displacement occurred while the patient was descending a flight of stairs, it was apt to throw her forward, helpless, and expose her to serious risks. I applied various kinds of bandages, elastic straps, etc., but found that nothing was so effectual in preventing the luxation as a roll of cloth two inches long and about half an inch in diameter, closely applied behind the external malleolus and retained in place by a tightly fitting and stout gaiter. She had sprained her ankle by a fall two months before I saw her, and had commenced to use the foot sooner than was prudent. One year after the accident the same dislocation could be produced by the same movements of the foot, and the pad for retaining the tendon in place was still necessary. The relation of the sprain to the dislocation is an interesting point, from the fact that a similar accident preceded the dislocation in another case reported below.

The literature of the subject shows the lesion to be an unusual one, and one which, as a rule, is not productive of permanent disability. Dr. R. M. Hodges has kindly given me the history of an unpublished case, of which the subject was a lady twenty-two years old. She sprained her ankle, and was imprudent in using the foot after the accident. A plaster blandage was therefore applied; on its removal, a few weeks

¹ Read before the Boston Society for Medical Observation.

later, the foot was apparently in good condition, and limited use of it was allowed. Shortly after, the patient had a second fall, and, as she supposed, sprained the ankle again. Dr. Hodges found that the tendon of the peroneus longus had become dislocated. All kinds of elastic bandages were tried without avail; with them she could walk on level ground, but walking on any uneven surface, the act of going down-stairs, or even the weight of bed-clothing, would throw the tendon out of its groove. Finally a boot, which was so arranged that the patient could not flex the foot, prevented the displacement, excepting at long intervals. At the end of six months it still troubled her occasionally.

Mr. Bryant reports¹ the following case; the patient was a woman aged twenty-nine. "It came on some ten days before, when walking, with a sudden pain behind the external malleolus, leading her to think she had been struck with a stone. She was at once disabled, and experienced severe pain in the part. . . . The tendon of the peroneus longus muscle was readily displaced from its groove behind the malleolus by giving the foot a slight twist; it passed obliquely across the bone, and could be rolled under the finger. It was readily displaced on abducting the foot, but it was kept in its position with great difficulty. The best means were found to be a good pad of lint fixed over the ankle and behind it by means of strapping. I saw her one month after, and the tendon seemed fixed in its place; she could walk without pain or stiffness. The bandage and pad were reapplied, and directions given to keep them on for a month." No later report is given. Mr. Bryant states also that "it is a question whether any other tendon can be similarly displaced; it has been said that the long tendon of the biceps may be, but it has never been demonstrated."

In regard to the latter statement, Mr. Bryant may have accepted the comments of Mr. Robert Adams² on, or overlooked an account of, two cases read by John Soden, Jr., of Bath, England, before the Royal Medical and Chirurgical Society of London, on July 6, 1841, and published in volume xxiv. of the society's Transactions; in both instances dislocation of the long head of the biceps had taken place during life, and the observation had been verified by an autopsy in each case.³ Mr. Soden quotes two additional cases that occurred in the practice of Mr. Stanley, which were also verified by autopsies. Sir James Paget, in his *Clinical Lectures and Essays*, mentions three cases in which the extensor tendon of the middle finger had been slipped over the head of the metacarpal bone, and in one of his lectures exhibited a specimen from the museum of St. Bartholomew's Hospital, where the long tendon of the biceps had been slipped from its groove.

¹ *Practice of Surgery*, page 992.

² *Treatise on Rheumatic Gout*, page 140.

³ See report of the Boston Society for Medical Observation in the *JOURNAL* for January 20, 1876, page 74.

Paget has observed one case where the tendon of the peroneus longus had been dislocated. The result is not given. In his notes he quotes Demarquay as having related two cases in which the accident occurred, and as having mentioned a third. "In one, a muscular and vigorous man, aged thirty-five, in a struggle with his horse, came to the ground with all his weight thrown upon one foot. He was unable to walk, and felt severe pain at the lower part of the leg and in the foot. No fracture or bone-dislocation could be detected, but there was considerable ecchymosis in the course of the peronei, and on the outer surface of the malleolus a tense cord could be felt rolling under the finger, and this was easily returned into the normal position of the peroneal tendons when the foot was extended. A long compress and a bandage sufficed to keep the tendons in place, and in three weeks the patient could walk on the limb. In the second case, a young woman jumped out of a window, and immediately afterwards was unable to walk and complained of severe pain in the foot. There was considerable ecchymosis in the lower third of the leg, extending from the posterior aspect of the fibula forward to the dorsum of the foot, and in the space between the fibula and the tendo-Achillis. The peroneal tendons lay in their natural position, but it was evident that they were not contained in their sheath; and Demarquay believed that they had been displaced in the fall, but had afterwards slipped back again into place."

Mr. Curling has recorded a case of dislocation of the tendon of the peroneus longus in the *British Medical Journal* for January 2, 1869.

Sir Astley Cooper reports the following case: "In June, 1837, says Mr. Sankey, I was called upon to attend Miss H., who had been thrown from her horse and had severely sprained her ankle. Upon examination I discovered a very unusual circumstance, namely, dislocation of the tendon of the peroneus longus muscle from its sheath. I applied, for some weeks, compresses and bandages; and when she went from this place everything appeared going on favorably, but Mr. Heming writes me that she still suffers inconvenience."¹

An interesting discussion on the displacement of tendons is contained in the Bulletin of the Academy of Medicine at Paris for 1874. It followed the presentation of the case of M. Charles Martins by M. Broca. The former had been the subject of a luxation of the tendon of the tibialis posticus muscle forward, the injury having been received while M. Martins was landing from a descending balloon. Messrs. Broca, Ollier, and Courty saw the patient soon after the accident, and corroborated the diagnosis of M. Pozzi. M. Martins was disabled for three months, and in that time wrote the paper just mentioned. The following cases were quoted:—

¹ Fractures and Dislocations, page 281. Boston. 1844.

Monteggia¹ reports the case of a young man who, in dancing, luxated both peroneal tendons. He had the sensation of having received a blow on the foot. The tendons having been replaced, the pain ceased at the end of a few days. When he commenced to walk they were again displaced, but it was easy to slip them behind the malleolus, though they would not remain there. These alternations of displacement and reduction finally ceased to be painful.

M. Benoit had known a dancing-master whose peronei were in this state, but they did not interfere with the exercise of his profession.

Monteggia himself experienced, upon putting his foot upon a cold pavement, a sharp pain in the sole of the foot, which he attributed to a semi-luxation of the long peroneal, or even of the tibialis posticus.

Robert has communicated to the Society of Surgery, Paris, the following observation.² A young man who threw himself out of a window, in an attempt at suicide, received a fracture of the thigh. There was found upon his external malleolus a well-pronounced swelling which was continuous with the tendon of the peroneus longus. Lower down this swelling bifurcated, and one of its portions extended towards the fifth metatarsal bone. It was evidently due to a luxation of the tendons of the long and short peroneal muscles, and it was impossible to replace them.

Jarjavay³ has observed three cases of luxation of the long peroneal, perfectly evident, and due to falls in which the foot was strongly inverted. The injuries were complicated with œdema and ecchymosis; the reduction was easy, and the cure had occurred at least in a month by maintaining the tendon in place with a compressing bandage.

Legouest⁴ observed one case, but the result is not stated. Gosselin, in the discussion at the Academy, reported one case. Towards the eighth day he was able to put on an immovable apparatus, and at the end of six weeks his patient could walk without crutches or cane. At that time Gosselin did not feel sure that the displacement would not recur, and he believes that the tendon will remain in place only when either the rupture in the sheath is closed, or an adhesion between the tendon and its sheath occurs; that direct and continued compression favors both conditions, and that it is impossible to obtain a permanent reduction at the outset.

Of the eighteen cases of dislocation of the peroneal tendons, including my own, thirteen were of the peroneus longus (one doubtful); five were of both the peroneus longus and brevis.

In five of the thirteen cases, including the doubtful one, no result is given. In two, the tendons did not become fixed in their groove, and

¹ *Instituzioni chirurgiche, parte seconda, page 336, 1803.*

² *Gazette des Hôpitaux, page 389, 1847.*

³ *Gazette hebdomadaire, iv, 387, 1867.*

⁴ *Gazette des Hôpitaux, page 191, 1868.*

no disability followed. In three, cures were effected in a month; in one, in three weeks; in one, the reduction seemed permanent at the expiration of a month after the accident, the apparatus was reapplied, and no other result was stated; in one, the patient suffered inconvenience some years after the accident — the ultimate result could not be ascertained.

In one of the group of five cases where both tendons were displaced, no result is given; in one, a cure was effected in three weeks; in one, the tendons could not be replaced — no statement is made as to the subsequent disability; in two cases, the tendons could not be confined in their groove, but no disability followed.

Fracture of the Tympanic Plate of the Temporal Bone, involving that Portion which separates the External Auditory Meatus and the Glenoid Fossa. — The patient was a young man twenty-six years old. The fracture was on the left side, and had resulted from a fall, in which he struck violently on the right mental angle of the lower jaw. He was somewhat stunned by the blow, but soon recovered and found that blood was trickling from his left ear, and that any movement of the jaw produced pain in the region of the temporo-maxillary articulation of the same side. He remained quietly at home during the day, and on the following morning presented himself at the out-patient department of the Massachusetts General Hospital. Blood had continued to ooze during the night, but had stopped when I first examined him. He called attention to the tenderness in the region of the articulation, and stated that any movement of the jaw produced pain and caused a crackling sound in his ear. There was some swelling over the joint, and the external meatus was filled with clot. Upon removing the latter a considerable diminution in the calibre of the passage was observed, and on carefully moving the jaw, a recurrence of the bleeding took place from a small fissure in the anterior portion of the meatus. There was a lacerated wound over the right mental angle of the lower jaw. The normal calibre of the meatus was restored by passing the finger into the passage and pressing in the direction of the joint. A slight crepitus, accompanied with mobility of the anterior portion of the auditory process, was perceptible at that time. The hearing was not impaired. The jaw was confined by a bandage. The patient was told to report on the next day, and confine his diet to liquid nourishment; he did not report again, and his whereabouts could not be ascertained, so that I am unable to give the result, but the symptoms presented by him seemed worth considering in connection with the well-known lesion of fractured base of the skull.

Mr. Prescott Hewett states¹ that “bleeding from the ears in severe injuries of the head has for many years past been held, and deservedly

¹ Holmes's Surgery, ii. 284.

too, as one of the most valuable diagnostic signs of fractured base." Cases are recorded in which the chin has been struck with such violence as to drive a condyle of the lower jaw into the cavity of the skull, causing compound fracture and death.¹ These statements admitted, it is reasonable to believe that the accident which occurred to my patient might, in another case, from a different application of force, produce a fracture on both sides. It is possible that this lesion should co-exist with the effects of concussion, the symptoms of which might be, for example, insensibility at first, the patient lying motionless and all but pulseless, with a countenance marked by extreme pallor, a cold skin, and the pupils dilated; given such a case, from which the patient would doubtless recover, the usual prognosis for fracture of the base of the skull might be a serious matter to the reputation of the surgeon. It seems fair to conclude that the chances, however slight, of an association of bleeding from the ears, due to the fracture described, and insensibility, with or without other symptoms of concussion of the brain, deserve consideration in the examination of all patients with suspected fracture of the base of the skull.

Compound Crucial Fracture of the Condyles of the Femur caused by a Blow on the Patella. — A large, muscular man, thirty years old and weighing about two hundred and fifty pounds, stepped from a third-story window while delirious from drinking, and struck the brick pavement with his left knee and wrist. When he was picked up, a number of bony fragments were seen lying on the pavement. Before he arrived at the hospital, he had bled freely from a small wound on the outer side of and just above the left knee-joint. Upon examination, the lower portion of the femur and the patella were found to be extensively fractured into the knee-joint, and the soft parts lacerated; there was also a compound fracture of both bones of the left fore-arm in its lower third. The patient being etherized, I amputated the thigh just below the middle by enlarging the wound and taking a flap from the outer and inferior surfaces. The fracture of the radius and ulna was put up in anterior and posterior splints. The patient was sent to the ward, and stimulants were administered to him. In the latter part of the next day he had a severe chill; stimulants were given and heaters applied. Delirium supervened during the evening. Toward morning he began to sweat profusely. From that time his pulse and strength gradually failed until he died, forty-eight hours after the accident. Decomposition set in so rapidly that within an hour after he died the whole body was enormously distended and much discolored. No autopsy could be obtained.

Upon examining the parts removed, I found the tibia and fibula uninjured. The patella was comminuted in its inferior third, the

¹ Holmes's Surgery, ii. 277; Chassaignac's *Plaies de Tête*, 158; *Journal hebdomadaire*, tome iii., No. 37, September, 1834.

superior and thicker part of the bone remaining intact. The articular surface of the femur presented a well-defined crucial fracture, one line separating the condyles, the other crossing the condyles half an inch in front of the inter-condyloid notch. Above the four fragments of the condyles, the shaft of the bone was comminuted. It is probable that the injury was received upon the flexed knee; also, that the greatest shock was received by the patella and by it transmitted to the femur. The patella then acted the part of a wedge in two ways; its vertical ridge splitting the condyles apart, and its horizontal ridge explaining in the same way the transverse fracture.

The fractures of the condyles, as also a transverse fracture of the femur just above the joint, have been noticed by writers, but I cannot find any notice of a well-defined crucial fracture of the articular surface of the femur. In this case, the comminution of the shaft and the compound fractures of the radius and ulna of course diminished the chances of the patient. I am led to report the case for the reasons which follow.

An article by Alfred Willett, published in the last report of St. Bartholomew's Hospital, contains the following: "Having noticed already the varying relations of the patella to the femur, it is requisite only briefly to direct attention to some peculiarities in their articular surface.

"First, that, from the two facets of the patella not being in the same plane, but looking somewhat away from each other, they form together an obtuse angle, their line of junction having a more or less well marked ridge.

"Secondly, that the configuration of the lower end of the femur places the patella, when the knee is flexed, in the depression between the condyles; and, from the articular cartilage and subjacent layer of condensed bone being here relatively thinner than upon the condyles, the inter-condyloid notch is the weakest part of this surface of the femur. If the question be asked, 'What happens when a person stumbles and falls forward on to his knee?' clearly the subcutaneous surface of the patella, standing out prominently between the condyles of the femur, receives the impact of the blow, and transmits it to the articular surface of the femur. But more than this results, for the patella acts as a wedge and the force of the blow has therefore a splitting effect directed against the weakest spot, namely, the inter-condyloid notch; hence, given sufficient violence, the inevitable result will be an upward splitting fracture between the condyles, terminating with the breaking off of both, horizontally, producing a T-shaped fracture; or, if the blow have been oblique, one condyle alone may be split off."

Willett here refers to the possibility of one fracture alone, namely, that resulting from the vertical ridge of the patella, by which the con-

dyles are split apart. He does not allude to the similar result here produced by the transverse ridge of the patella, in splitting the condyles transversely. It will be seen, on examining the healthy bone, that the vertical and horizontal ridges of the patella cross each other at a point situated a little below its middle. This point is usually the thickest part of the bone, and forms a considerable elevation, closely applied to the articular surface of the femur when the limb is flexed. With a sufficient blow, a stellate fracture of the articular surface of the femur is thus readily explained. It corresponds with that in the wrist-joint when the lunar and scaphoid bones are driven against the articular surface of the radius. This wedge-like action of the carpal bones, spreading the hollow of the corresponding articular surface, was described some years ago by Dr. H. J. Bigelow in the report of two interesting cases of stellate crack or fracture of the radius at the wrist, diagnosed by him during life and verified by autopsies.¹ Through the kindness of Dr. Bigelow, I am enabled to show a specimen from an unpublished case, which involved the ankle-joint and also exemplifies the mechanism of this fracture. The injury occurred to a patient who entered the hospital last year; he received it by falling eight and a half feet, through a railroad bridge, striking the ground with his heels, the right foot in advance of the left. He entered the hospital twelve days after, with a compound comminuted fracture into the ankle-joint, which subsequently required amputation of the leg. In this instance, the rounded and convex articular surface of the astragalus acted the part of a wedge against the inferior articular surface of the tibia, producing a stellate fracture.

Penetrating Gun-Shot Wound of the Chest, with Probable Lodgment of the Ball in the Vertebral Column. — The patient was a man twenty-seven years of age, who, having been depressed for some time, attempted suicide by laudanum; that failing, he shot himself the next morning with a revolver (Smith and Wesson's). I saw him about six hours after, with Dr. Bemis, of Medford, and ascertained that he had placed the muzzle of the weapon close to the skin, near what he supposed to be the heart, and fired. His appearance suggested collapse from hemorrhage and shock; the skin, pale and cold, was covered with perspiration, the pulse very small and irregular. His mind was perfectly clear, and he had very little pain, unless he attempted to change his position. An examination of the injured region disclosed a small wound between the fifth and sixth ribs of the left side, in a vertical line and two and a half inches below the nipple of that side. The skin for two inches around was blackened by powder. The apex of the heart could be felt pulsating at a point three quarters of an inch to the left of the wound. There was no interference with respiration, as far as could

¹ JOURNAL, lvi. 99; quoted and illustrated by Hamilton in his *Fractures and Dislocations*, second edition, page 266.

be ascertained from auscultation of the front of the chest, and no hæmoptysis had occurred. If the location of the ball had warranted an exploration, his weak condition forbade it. Stimulants and opiates as occasion required had been administered and were continued, with but slight expectation on the part of his attending physician or myself that he would rally.

I saw him twenty-four hours later, and was informed that very little change had occurred until evening, when his pulse became imperceptible, and his respiration gasping; it seemed as if he would die at any moment. Stimulants were continued, and the pulse gradually strengthened from that time until my next visit, when it could be counted 104 to the minute and was of good strength. He was able to sit up in bed, with but little pain, so that I was able to complete my examination. There was no trace of a wound of exit, and there had been no hæmorrhage from the wound of entrance. No evidence of the location of the ball could be gained by auscultation or percussion. There was a trifle less resonance, and the respiratory murmur was a little less distinct, at the right base than on the left side. The only symptom that the patient complained of was paralysis of motion and sensation in the right leg, from Poupert's ligament downward. At my request he placed the pistol in the same position, as near as he could recollect, that it occupied when he fired it the day before. A straight line in the axis of the barrel crossed the spinal column diagonally, and suggested the probability of a lodgment of the ball in the vertebral column, unless it had been deflected in its course. No unfavorable symptoms had developed within twelve hours.

I saw him again two weeks after. He was sitting up, dressed, and stated that he felt perfectly well in every particular, with the exception of the toes of his right foot. He could not extend them, but could flex them, and the sensation was good. All his functions were well performed. He had taken a drive, and enjoyed it. I examined the wound and found that it had entirely healed. As he gradually accustomed himself to exercise, he observed that the right leg gave him some trouble in walking. Four months after the injury his gait was decidedly affected by the want of complete control of the extensors in the same limb.

Considering all the facts presented in the case, a diagnosis of penetrating wound of the chest seems reasonable (if we admit the statement of the patient that the barrel he discharged was loaded with ball), from (1) the close proximity of the muzzle of the weapon to the soft tissues between the ribs (the pistol will send a ball through a two-inch plank at one hundred feet); (2) the direction given the ball by the pistol; (3) the paralysis of the right leg.

Against this evidence may be fairly presented (1) the possibility of

a deflection of the ball by the upper or lower border of the ribs on either side of the wound, so as to direct it around the chest to the spine, without perforation of the thoracic cavities ; (2) the possibility of a transmission of shock by the ribs to the spine, caused by the close proximity of the muzzle of the weapon during the discharge of a blank cartridge ; (3) the fact that no hæmoptysis or emphysema resulted from the injury, or any other symptom which could be referred to a disturbance of the contents of the thoracic cavities.

The nature of the wound and the strong wish of the patient not to live, after the injury, seem reasonable evidence of the use of a loaded cartridge. The character of the patient was good, and his word was to be relied upon ; he stated positively that he did use a loaded cartridge. The weapon when found was loaded in every barrel but one, and that one contained the copper cylinder which is usually loaded with powder and fastened to the ball. The mental depression was caused by the loss of his wife.

The close proximity of the muzzle to the surface of the body would certainly seem to allow very slight opportunity for immediate deflection. Unless immediate deflection took place, perforation of the thoracic cavity was probable. With reference to the absence of emphysema and hæmoptysis, as evidence against the penetration of the chest or even wound of the lung, the following quotations are appended : —

“Bloody expectoration is a very deceptive diagnostic sign of lung wound. Out of nine fatal cases that he had collected, only one had hæmoptysis, and in seven cases in which the lung was unwounded, two only had hæmoptysis.”¹

“Bloody expectoration is not a pathognomonic characteristic of penetration of the lung. He has seen it accompanying simple contusion or superficial wounds.”²

“Neither emphysema nor secondary hæmorrhage appears to have led to a fatal termination before Sebastopol.”³

Longmore⁴ enumerates the following symptoms of gun-shot wound of the lung : constitutional shock, collapse and tendency to syncope from loss of blood, hæmorrhage from external wound, effusion of blood into pleural cavity, hæmoptysis, dyspnœa, emphysema ; and states that “we must not conclude that a lung has not been wounded because one or more of them is absent.”

Penetrating wounds of the chest with lodgment of the ball in the vertebral column are rare, and recovery from them exceptional. One case only is reported in Circular No. 6 of the Surgeon-General's Office at Washington. The patient was a private soldier, twenty-one years

¹ Dr. Fraser, *Cooper's Surgical Dictionary*, i. 826.

² Appia, *Cooper's Surgical Dictionary*, i. 826.

³ *Cooper's Surgical Dictionary*, i. 826.

⁴ *Holmes's Surgery*, ii. 191.

old. The ball entered at the left sterno-clavicular articulation, traversed the apex of the left lung, and lodged in the vertebral column. Immediately after his injury, he had hæmoptysis. He was able to walk from the field of battle to the hospital steamer, six miles distant. He stated that his wound bled very freely. When admitted to the hospital his face was dusky, his pulse accelerated, and crepitant râles were audible in the left chest. There was partial paralysis of the arms. He was ordered one eighth of a grain of tartarized antimony every two hours, low diet, and perfect quiet. He gradually improved, with one or two drawbacks, ultimately recovered, and was transferred to the Veteran Reserve Corps.

Dr. J. Mason Warren describes the following case in his *Surgical Observations and Cases*:¹ A woman was shot from behind. She lived three days only, and at the autopsy it was found that one of the bullets had passed through the cavity of the chest and lodged in the body of a dorsal vertebra. A second bullet struck the first rib and was cut in two by it, one half traversing the top of the rib, the other traversing the lung, being found loose in the cavity of the chest. The hæmorrhage produced by this wound filled the chest, compressed the lung, and was the immediate cause of her death. The third bullet entered the neck, and its course could not be traced.

As to the mortality of penetrating wounds of the chest, "Mouat and Wyatt, whose statistics were made from the returns of the Russian army at the siege of Sebastopol, state that out of two hundred cases only three recovered."²

According to Dr. Chenu's Crimean returns the mortality was 91.9 per cent. In the war of the rebellion, results were ascertained in 1272 cases; of these, 930 were fatal.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, JR., M. D.

METHODS.

*Double Staining with Hæmatoxyline and Aniline.*³ — Mr. W. H. Poole has used this method with great success in staining sections of the brain and cord. The two agents, according to this author, are well fitted for double staining, as the aniline has the strongest affinity for precisely those parts for which hæmatoxyline has the least. This view is not that usually held. The sections are put into logwood for from twenty to twenty-four hours, and then washed in weak spirit, which in turn is removed by water. It is then plunged into a moderately strong solu-

¹ Page 560.

² Erichsen, *Science and Art of Surgery*, page 397.

³ *Quarterly Journal of Microscopical Science*, October, 1875.

tion of aniline for from one half to three quarters of a minute, again washed in spirit, and after the usual process mounted in dammar. The protoplasm of the cells is much bluer than the nuclei.

The effect is said to be particularly good in the cerebellum, where the medullary substance is of a rich purple and the cortical of a pale blue, in which the cells are very clearly seen. We are not told how well these preparations retain their color, and as neither of the agents is very trustworthy in this respect we fear their permanence is rather doubtful.

Aniline black has been introduced by Mr. H. R. O. Sankey as a new staining agent especially suited for the brain.¹ It has the quality of durability that, as far as we know, all other aniline dyes lack. This is due to the fact that it is but slightly soluble in alcohol. According to Mr. Sankey, the best way is to make a very strong solution in water and to pour that into alcohol. It stains in a few minutes, giving a bluish-gray color.

Eosin,² a new red coloring agent, is apparently a valuable one, but as a communication of some length concerning it has been presented to the JOURNAL recently, we forbear any discussion.

The Injection of Gold Chloride.³ — According to Dr. Thin and Mr. J. C. Ewart, very valuable and striking results are to be obtained by this new method of applying gold. The paper in which they announce their discovery treats chiefly of the lens, between the fibres of which they found cells after injecting a small animal from the aorta. The method is as follows: The animal is bled to death and the canula introduced as soon as the flow of blood ceases. The gold solution, of the strength of one fourth of one per cent., is injected till the tissues are greatly distended; shortly after which the eyes are cut out and placed for fifteen minutes in a gold solution of one half per cent. Sometimes logwood staining was also used twenty-four hours after the gold. This method is very advantageous, not only for the lens but also for the cornea and sclerotic. These observers have applied it to other tissues, but give as yet no details of steps. The elastic fibres in tendon are said to be finely shown by an injection through the femoral.

BONES AND MUSCLES.

Sesamoid Bones of the Hand. — Professor Aeby⁴ has examined seventy-one hands apparently to demonstrate that sesamoid bones are far more common than is supposed. The following passage from Quain's Anatomy gives perhaps a fair idea of the general impression in regard to them: "A pair of sesamoid bones is placed in the palmar wall of the metacarpo-phalangeal articulation of the thumb; and similar

¹ Quarterly Journal of Microscopical Science, January, 1876.

² Archiv für mikroskopische Anatomie, Band xii., heft 2.

³ Journal of Anatomy and Physiology, January, 1876.

⁴ Reichert and Du Bois Reymond's Archiv, 1875, heft 2.

nodules, single or double, are sometimes found in the corresponding joint of one or more of the other fingers, most frequently of the index and little fingers." Professor Aeby has examined these joints of the index and little fingers only with the following results. He never found more than one sesamoid bone in a joint, and when present it was *always* on the radial side in the index and on the ulnar side in the fifth finger. Of the seventy-one extremities, twenty-nine had bones in both of these joints. In one case, it was found in the fore-finger only, and in twenty-one in the little finger only. In twenty cases it was found in neither. Thus it appears that it occurred fifty times in the little finger to thirty in the fore-finger. There appeared no special difference between the right and left hand, nor between hands of men and women.

The Secondary Arches of the Foot.—Mr. S. Messenger Bradley,¹ having studied several sections through the foot, passing from the heel through the great toe, the third toe, and, as we infer, through various intermediate points, has concluded that the articular surfaces of the tarsal and tarso-metatarsal joints are all arcs of circles, with the exception of the joint between the scaphoid and cuneiform, which occasionally is not. Mr. Bradley does not mention to which of the three cuneiform bones he refers. He gives the diameters of the circles of which the various articular surfaces are arcs, without stating in what plane the measurements are made; but inasmuch as he gives a wood-cut of a section through the third toe, we suppose it is in that.

We have verified his results on a very nearly similar section, and our observations agree very closely with Mr. Bradley's; but we are forced to the conclusion that a large number of sections within the limits covered by his observations would show many articular surfaces that are far from arcs of circles. Thus, he figures the joint between the scaphoid and the external cuneiform as an arc of a circle with the convexity backward, and in a section in our possession through the scaphoid and the first cuneiform we find also that there is a true arc of a circle, but it has the convexity forward. Between these two extremes there must have been many planes in which the sections would not have shown arcs. Again, in our last-mentioned section we find the joint between the internal cuneiform and the first metatarsal perfectly straight. Although believing that Mr. Bradley has been rather hasty in his conclusions, we are ready to admit that motion in many of these joints is rotary and not sliding, and that this arrangement, to which he is, we believe, the first to call attention, goes far to account for the strength and solidity of the foot.

*The Function of the Levator Ani.*²—It has been thought by most authorities that this muscle assists in the act of defecation by raising

¹ Journal of Anatomy and Physiology, January, 1876.

² Dr. Julius Budge, in Berliner klinische Wochenschrift, July 5, 1875.

and dilating the sphincter, though Henle and Cruveilhier have not shared in this opinion. Dr. Budge agrees with these authorities that the reverse is the case, and supports his view by dissection and experiment. He finds that some of the fibres of this muscle pass into the pelvic fascia, which is made tense by their contraction, and that some go, as is well known, to the external sphincter; but that the greater number are inserted into a delicate fascia surrounding the rectum in such a way as to form loops around it. There are two chief bands on each side, a smaller anterior and a larger posterior one, each of which crosses the median line and runs somewhat around the rectum, so that their simultaneous contraction must close it. This was proved, at least in the dog, by the following experiment. A dog having been killed and the abdomen opened, a glass tube containing water was fastened into the upper part of the rectum. Galvanization of the levator ani stopped at once the passage of the water, which had been escaping from the anus. The author holds that under some circumstances the muscle may assist in defæcation, but here his argument is less apparent. He believes that it is due to this muscle that patients in whom the sphincter has been divided often retain some control over the fæces. It is probable, no doubt, that the superior sphincter assists in this when present, but its small size and frequent absence make it unlikely that it is of much importance.

(To be concluded.)

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

EDWARD WIGGLESWORTH, JR., M. D., SECRETARY.

DECEMBER 20, 1875. — The regular paper for the evening was read by DR. O. W. DOE, upon —

The Efficacy of Cold-Water Treatment in Typhoid Fever. — Since Brand, in Germany, first made known his investigations relating to the use of cold water in the treatment of typhoid fever, clinical researches have given rise to different conclusions regarding its beneficial results, which perhaps may be dependent upon the various methods of its application.

The method pursued by Brand was to place the patient, at the very commencement of the disease if possible, in a bath at a temperature of 68° Fahr., and to pour over the head for two minutes water at a temperature of from 43° to 47° Fahr. Friction was kept up on the limbs under water for five minutes, and the patient was then allowed to rest quietly in the bath for ten minutes longer, when, without being dried, he was removed to bed and lightly covered. These baths were repeated every three hours until the temperature in the rectum measured 101°.

Others make use of a bath at a temperature of from 50° to 60° Fahr., continued from ten to fifteen minutes, or until the patient has a chill.

Liebermeister sometimes recommends shower baths, or, for children and for those persons of a naturally weak constitution, cold packing, continued from ten to twenty minutes, and repeated from three to seven times at very short intervals. He considers four packings equal to a bath of ten minutes' duration at a temperature of 68° Fahr.

Ziemssen advises placing the patient in a bath at 86° Fahr., and gradually reducing the temperature by the addition of cold water.

My object in the present paper is to offer the results derived from the different methods of treatment pursued by Professor Friedreich in his clinic at the hospital in Heidelberg. For the facts herein contained I am indebted to his assistant, Dr. Friedrich Schultze, who has made a very careful study of the cases, and has kindly allowed me to make use of the results obtained from his investigations.

The cases, numbering in all six hundred and forty-eight, extended over a period of ten years, from 1864 to 1873 inclusive, and were divided into three different series.

In the first four years the cases were treated without baths, excepting when symptoms of coma supervened, and then a bath of 95° Fahr. was given, combined with affusion of cold water over the head.

In the three following years the treatment consisted in the administration of two baths a day at a temperature of 90.5°, cooled down to 72.5°, and continued for half an hour; occasionally cold packing of the entire body was practiced.

During the last three years the cases were treated according to a systematic method of heat abstraction in the following manner. As soon as the thermométer in the axilla showed a temperature of 102.5°, a full bath was given, and continued from fifteen to twenty minutes, with a temperature usually of from 72.5° to 77°; the lowest being 68° and the highest 86°. While the patient was in the bath, water at a temperature of from 41° to 59° was poured twice or three times over the head. In addition to these cold baths, the patient, in the interval, was placed upon rubber cushions, of the size of the mattress and filled with water at a temperature of from 50° to 59°, increased even to 80° if the patient was of a very delicate constitution. In the case of those who were previously very strong and robust, ice-bags were also used, being placed upon the chest and abdomen.

The contra-indications to this very energetic mode of treatment were collapse, perforation of the bowels, and intestinal hemorrhage: cases of organic cardiac affections received only moderately cool baths.

During the ten years in which these observations were made, the internal treatment was not essentially altered; it consisted usually in the administration of calomel in the early stages of the disease, followed by acid drinks and the occasional use of quinine in large doses; so that the relative results obtained are in no way affected by the internal treatment, inasmuch as it was the same in all the cases.

In comparing the first seven years — during the first four of which no baths were given unless coma supervened, while in the last three they were only imperfectly administered — with the last three years, when the baths were systematically given according to thermometric indications, we find the mortality-rate

diminished from 11.2 to 6.7 per cent. ; and if we select only those cases of a severe type, we find a difference of 5.5 per cent. in favor of the latter method of treatment. If we take those cases in which no baths at all were given, and compare them with those of a similar character in the last series, we find among two hundred and sixty of the former a death-rate of 14.2 per cent. ; and among one hundred and sixteen of the latter only 10.3 per cent., a difference of nearly 4 per cent. The change in treatment made at the commencement of the second series, when two prolonged baths of half an hour each were daily given in place of entire freedom from cold baths, was attended with an increase in the mortality-rate from 14.6 to 20 per cent. ; and during the two succeeding years, in which this treatment was followed, the death-rate was respectively 23 and 18.1 per cent. It is interesting to notice that in the year 1865, when 86.6 per cent. of the cases treated were of a severe type, without baths the mortality-rate was only 12.5 per cent. ; while in the year 1869, when only 67.5 per cent. of the cases were of a severe form, under the treatment of two baths a day the mortality was 23 per cent., an increase of ten per cent., when there was a decrease in the severity of the disease of 19 per cent.

With the commencement of the systematic method of heat abstraction as practiced in the last series, the mortality fell immediately from 18.1 to 9 per cent. Other observers, Wunderlich for example, comparing the results of Brand's method with those of other systems of treatment in their own practice, report a decrease from 18.1 to 7.2 per cent. ; Jürgensen from 30.2 to 7.5 per cent. ; Liebermeister from 26.2 to 9.7 per cent. These results, though very encouraging, fall far short of the success obtained by Brand, who reports no fatal case among the eighty-nine patients thus treated in 1870 and 1871 ; And never a fatal result where he had attended the patient from the very commencement of the disease.

As regards the influence of this method of treatment by frequent cold baths upon the different phases of the disease, it was noticed that in the first series without baths 15 per cent. manifested severe cerebral complications, in the second series 28 per cent., and in the last only 6 per cent ; and it was especially noticeable that when this complication existed it was much milder in those cases treated with baths than in those not so treated.

Previously to the investigations of Schultze, most observers noticed neither an increase nor a decrease of pulmonary or pleuritic affections ; but his observations showed that in the first series 10 per cent. were affected with atelectasis or hypostasis, in the second 10.6 per cent., and in the last only 5 per cent. Croupous pneumonia occurred six times in three hundred and forty-nine cases treated without baths, and only twice in two hundred and thirty-seven cases with baths. The frequency of pleuritic affections and the continuance of the bronchial catarrh seemed to be unaffected, excepting that in bronchitis the cold bathing appeared to act as a powerful expectorant ; this was attributed by Schultze to its tonic action, removing that condition of apathy in which the irritation and desire to cough were not experienced.

The baths, through their enforced cleanliness and stimulating effect upon the capillary circulation, reduced the frequency of bed-sores to almost a minimum ; this complication occurred in only 3.8 per cent., whereas previously to the use

of the baths it had existed in 11 per cent. of the cases treated. The frequency of the formation of thrombi was also found to be diminished from 3 per cent. before to 1.6 per cent. after the use of the baths, and almost always affected the femoral vein, more often the left than the right.

This method of treatment seemed to exert a very favorable effect also on the tendency manifested by the disease to relapse, as shown by comparing the first three with the last three years; in the former 15 per cent. suffered from relapse, while in the latter only 5 per cent. I find also that in the clinic of Professor Ziemssen, at Munich, during the year 1874 only 4.5 per cent. of the cases similarly treated suffered a relapse.

If we compare the duration of the disease in the two series, we find that in the former, in which the patients did not have baths, the average course was twenty-seven and one fourth days, while in the latter, in which baths were used, it was twenty-three days, the longest periods being respectively one hundred and sixty-four and one hundred and forty-three days.

In all the cases under treatment meteorism was observed only four times in a severe form, its rarity being attributed by Professor Friedreich to the administration of calomel at the commencement of the disease. He asserts that he never saw this symptom occur but once when calomel had been given in the early stage of the attack.

Thus far we have seen only the beneficial effects of the cold-water treatment; but if now we look to the frequency of the occurrence of intestinal hæmorrhage, we find that this method of treatment exerts a very serious influence thereon. Wunderlich found in his clinic at Leipzig that the frequency of this complication was increased, though fortunately not the mortality. Professors Ziemssen and Gerhardt have also referred to its increased frequency. Schultze, in his investigations, found it to occur in 5.3 per cent. of the cases treated without baths, and in 10.9 per cent. of those treated with baths; and among the latter, three had a second attack of hæmorrhage, an occurrence never observed in those cases treated without baths. The possibility that this was dependent upon a more hæmorrhagic character of the disease during the last three years is excluded by the fact that in those patients treated outside of the hospital, where the cold baths were not administered, the number of hæmorrhagic cases fell from 10.9 to 5 per cent. The hæmorrhage usually occurred in from one to three hours after the bath. It was noticed that cases of heart-disease complicating typhoid fever were much more prone to hæmorrhage than others; two cases occurred in seven thus affected.

The frequency of neuralgia of the different nerve-trunks was also noticeably increased; it occurred in 5.5 per cent. of the cases treated with baths, and in only 1.2 per cent. of those not receiving baths. Another undesirable effect was the marked hyperæmia of the lower extremities occasionally observed, continuing until the baths were suspended.

Aside from the treatment, the following peculiarities were noticed at the Heidelberg clinic. In the primary stage of the disease stiffness and pain in the cervical muscles were observed in twenty-three of the six hundred and forty-eight cases, sometimes so severe as to simulate spinal meningitis; this symptom I have myself noticed in a recent case under my own care, and in so severe a form as to mask the real disease throughout the first week.

In seventy cases the disease was ushered in with a chill, though, if a relapse followed, this symptom was seldom observed; and it was also noticed that usually in those attacks beginning with a chill and sudden high rise of temperature, the disease ran a mild course. This fact was observed by Jürgensen also.

The roseola was usually apparent at the end of the first week; in no case earlier than the fifth or later than the twelfth day.

Enlargement of the spleen was noticed in all of the six hundred and forty-eight cases excepting thirty-five, and in two hundred and twenty-one patients it was so large as to be felt below the ribs. Professor Friedreich lays great stress upon this splenic enlargement as a diagnostic point in typhoid fever, and considers it the earliest tangible evidence of the disease, even observable before any rational symptoms manifest themselves. He considers this not only an early symptom, but also the last to disappear, and believes that as long as there remains any enlargement of the spleen there is always danger of relapse. He diagnosticated an impending typhoid at one time from accidentally detecting an enlarged spleen in the person of his assistant, who, notwithstanding, expressed himself as feeling perfectly well. Within the next three days the supervention of other symptoms of a severe form of typhoid confirmed his diagnosis.

Professor Friedreich maintains that by the administration of twelve grains of calomel at the beginning of the disease its course may be checked, or at least rendered very mild; his confidence in this is such that he feels justified in speaking of it as the abortive treatment of typhoid fever.

DR. BOWDITCH asked if the calomel treatment of typhoid fever was a recent method.

DR. DOE said it had been employed for some ten years, and that about twelve grains in three separate doses were to be given per diem. In applying baths, Friedreich puts the patient into water of the temperature of the body, and cools it subsequently by degrees.

DR. EDES said he had tried the cold-water treatment. He thought it should be employed early in the disease. If not used before the second or third week the results were less favorable. He had tabulated about thirty cases in which this plan had been adopted in the first week of the attack, and the mortality had been quite small. He had given several cold baths daily. He thought the enlargement of the spleen was not often reported in cases occurring in this region, possibly because it was not always sought for.

DR. HASKINS said that he always examined the spleen in cases of typhoid fever, and almost always found it enlarged. In a recent case of a child of eighteen months this enlargement had served as a means of differential diagnosis to eliminate the possibility of confusion with meningitis. He inquired as to the theory in regard to the use of calomel in typhoid fever.

DR. DOE replied that it was given as an antiseptic, upon the idea that the disease was due to bacteria, according to Friedreich.

DR. TARBELL said that he believed the use of calomel in typhoid fever was more general than is usually supposed. He knew good practitioners who always began with calomel, and for the last two years he had done so himself.

DR. MORRILL referred to an article published by an Edinburgh physician

some three years since, in which the occasional use of saline cathartics was advocated as the most effectual means of washing out the intestines and removing fecal matter from direct contact with the ulcerations, a condition of things which cannot fail to be injurious to the patient if the generally accepted theory of the origin of typhoid fever be correct.

DR. J. J. PUTNAM mentioned that Dr. Emerson, of Concord, arranged the patient upon pillows so as to form an inclined plane, and then poured the water over the patient, making a gutter by means of an India-rubber blanket. He also stated that, according to Traube, calomel lowers the temperature in other acute febrile processes. In pneumonia Traube gives five grains of calomel, repeating, if necessary, until two or three dejections have taken place, and finds, when this plan is pursued, that the temperature falls perceptibly.

A New India-Rubber Splint. — DR. C. P. PUTNAM showed a rubber splint which he had devised upon the principle of lacing boots across by means of hooks upon the two sides, which hooks serve as points of attachment for a cord. Ease to the patient and facility of application were the advantages claimed for this device.

TYNDALL AND BASTIAN ON THE GERM THEORY OF DISEASE.

THE recent experiments of Professor Tyndall in reference to the phenomena of putrefaction and infection, although adding no new facts to those already brought forward in the discussion of the germ theory of disease, are interesting as corroborative evidence emanating from high authority. The question about which so many experimenters have differed is, simply, whether putrescible solutions after boiling for a time can be exposed to an atmosphere free from organic germs without undergoing decomposition. The school of which Professor Tyndall is the present champion asserts that fluids can be thus exposed without decomposing. Many of our readers will remember Tyndall's experiments with floating particles in the atmosphere, which attracted so much attention a few years since. He then showed that these particles could be completely removed from the air by heat, which destroys their organic matter; by filtration through cotton-wool, or, to some extent, through the lungs; or by allowing them to settle. The most delicate test of the purity of air thus treated was found to be the passage through it of a beam of light. The path of a ray of light in a darkened room is well known to be marked by the illumination of floating particles. If the beam, however, is passed through a flask of purified air, the space inside the vessel appears dark. Apply now the beam to a flask filled with a clear liquid, and we find the light transmitted as through a lens, the contents appearing dark, while a turbid liquid appears brilliantly luminous. As turbidity is a consequence of putrefaction in a liquid, we have here a method of detecting the earliest changes in fluids subjected to the tests above indicated. This light test of liquids was the prominent feature of Tyndall's experiments. His apparatus is described as an air-tight wooden box, of which one side was glass, while each end had a glass window through which the beam

of light could pass. Through the bottom passed several test-tubes, sealed in their holes, and with their open ends upwards. In the top was an India-rubber stuffing-box, through which passed a long pipette by which liquid could be dropped into each test-tube in turn. The inside of the box was moistened with glycerine, so that all particles that settled on it might be retained. Alterations of volume were provided for by small tubes, plugged with cotton-wool at the top. The apparatus remained at rest for three days, the passage of a beam of light showing the air at the end of this time to be free from dust-particles. Organic solutions were then dropped into the tubes and boiled for five minutes. Similar experiments were made with air purified by filtration and by calcination. Except in a few cases where the cause of failure was obvious, no turbidity occurred, and no organic life was developed, even after the lapse of months. Every one of these solutions, when exposed to ordinary air, putrefied rapidly. Professor Tyndall, in closing his account, remarks, "Let us imagine that these minute and invisible particles were increased in size till we could see and handle them, that we planted them in garden-mold, and that in a week's time there came up a crop of cress or of grass; would any sane man have a doubt as to their nature?"

These statements by Tyndall have brought out a somewhat severe reply from Bastian, whose views on spontaneous generation are well known. The explanation of Tyndall's experiments, he thinks, is an easy one. The fermentability of these solutions is destroyed by boiling the germs, which are thus killed, while the virtues of the dissolved organic matter are impaired. The barrenness of the infusion is attributed by him, therefore, to the absence of unheated organic particles forming part of the organic *débris* which enters so largely into the composition of atmospheric dust. Tyndall's failure to obtain putrefaction is stated by Bastian to be due to his neglect to maintain the infusions at a sufficiently high temperature after boiling. The temperature of the surrounding atmosphere should be as high as 90° , or even 115° , while Tyndall was content with 60° and 70° . Care should also be taken to make the infusions strong enough; a weak one will show no trace of living organisms for a long time. Dr. Sanderson accepts with Bastian the fact that many boiled fluids will putrefy in closed vessels from which air has been expelled by boiling, but explains it by a "latent vitality" in some bacteria not extinguishable by exposure for ten minutes to the influence of boiling water. Bastian concludes with the following remark: "If, as Professor Tyndall believes, and as his experiments seem to show, bacteria and their germs are killed by boiling them for five minutes, nothing remains but for us to shake hands over the establishment of the occurrence of 'spontaneous generation' and the overthrow of the germ theory of disease."

Inasmuch as Bastian accuses Tyndall of making a very insufficient study of the previously recorded work of other investigators, we are somewhat surprised to find him making the statements cited above without allusion to the investigations of those who have found bacteria still living after prolonged boiling, or comparatively indifferent to strong acids, ether, or chloroform. Jeffries Wyman found that bacteria were not destroyed until after six hours' boiling. Solutions thus treated have remained for five years without symptoms of putrefaction. If

this be true, Bastian's experiments become worthless to him, while Tyndall has shown how almost complete immunity from decomposition may be procured by a process which fails to destroy entirely organic life at the outset. If, as Professor Bastian says, the formation of correct notions upon this subject is of enormous importance, as regards both the science and the practice of medicine, one would hardly expect to hear him decry attempts to investigate it, or demand of others that they should look upon his experiments in this direction as exhaustive.

MEDICAL NOTES.

—The advantage of the employment of artificial respiration in some cases of apoplexy is illustrated in the report of a case to *The Medical Record* of January 22, 1876. Dr. C. J. Cleborne writes that while traveling in the cars a gentleman was seized with apoplexy. Dr. Cleborne had him immediately removed to the parlor car, laid on the floor, and his clothing loosened. By this time he was entirely unconscious, his breathing was slow, labored, stertorous, and puffing; his face was flushed and turgid; his pulse slow, hard, and intermitting; his pupils slightly contracted; no convulsions or paralysis. Fearing that his patient would die by apnoea, — the face becoming more livid, the coma more profound, and the respirations feeble and labored, — Dr. Cleborne had recourse to Sylvester's method of artificial respiration, and in an hour and a quarter had the satisfaction of seeing the patient return to consciousness, so that by the time the train reached his place of abode he was in a condition to be removed to his residence. He is now in the enjoyment of good health. The writer is convinced that but for the timely use of artificial respiration a fatal result must have occurred.

—Dr. A. B. Bowen recommends, in *The Medical Record* of February 12, 1876, the following as a "radical cure for piles." He injects into the hemorrhoidal tumor a solution composed of equal parts of carbolic acid and fluid extract of ergot, using from ten to fifteen minims of the solution. The process is to be repeated once a week for five or six weeks, when the tumor disappears.

—A more Effectual Method of applying Iodine to the Interior of Certain Cysts is given by Furneaux Jordan, F. R. C. S., in *The Lancet* of January 20, 1876. He has met in practice with two classes of scrotal hydroceles in which the ordinary methods of treatment are either difficult to use or uncertain in their result. In boys and men there are occasionally encysted hydroceles of the testis, or of the cord, which continue to increase in size, or in which treatment is urgently requested. In such cases the following is a trustworthy method of treatment. The cyst being well isolated, made tense, and brought near the surface, a stout needle armed with silk is passed through the centre, and the threads left hanging. The fluid quickly oozes away, especially if slight traction is made on the threads. The threads at one opening are then wet with iodine liniment, — liniment because the quantity required is so limited, — and drawn so as to leave moistened portions within the cyst. Gentle friction will

help to spread the iodine over the lining membrane of the cavity. An hour later, freshly moistened portions may again be drawn through if the cyst is large. In a very small cyst a single thread, moistened and kept in one hour, will suffice. Another class of cases are those of simple vaginal hydrocele, in which the injection of iodine and other ordinary methods of treatment are unsuccessful. A case is related of a hydrocele in a young man which had resisted the various methods of treatment, but which soon disappeared by passing through the cyst at three o'clock a double silk thread at two spots. In a few minutes all the fluid had oozed out, and the threads, moistened with iodine liniment, were drawn into the cavity. The patient was directed to repeat the process in an hour. He moistened the threads four times in six hours. At midnight the effects had become so sharp that he was glad to remove the threads, as he had been directed. He remained at home one day only, and was shortly and permanently well.

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CLINIC.

[SERVICE OF S. CABOT, M. D.]

Extensive Burn.—Ann C., a strongly-built domestic, entered the hospital December 27, 1875. One week previous, while she was tending a furnace fire, there was an explosion of coal-gas, which ignited her clothes. Her left fore-arm, her back from the spines of both scapulæ downward, the nates, and the back of both thighs as far as the knees were deeply burned. Both sides from the axillæ downward were also burned, showing the bared papillæ of the skin. Pain was very severe, and was relieved by morphia, subcutaneously, *pro re natâ*. The burned surface was brushed over with mucilage, to which sufficient molasses had been added to make a flexible pellicle. Great relief was experienced from this dressing. The pulse was 114, and moderately strong.

January 4, 1876. Two weeks after the accident. The patient's condition up to this date had been almost unchanged; the pulse had averaged 120, and the temperature had hardly risen above 100° Fahr. The sloughs were beginning to separate in places. Slight difficulty in breathing was now complained of for the first time, but the position of the patient, lying upon her abdomen and chest, might account for this; nothing more than a roughening of respiration was detected with the stethoscope.

January 5th. Deglutition noticed to be somewhat embarrassed, and the tongue and fauces were found to be covered with an aphthous deposit.

January 6th. The patient became unable to speak aloud or to swallow. From this time she was nourished by enemata of brandy and beef-tea. The edges of the burns were healing rapidly, and the discharge of pus was profuse. The pulse, which had thus far been almost constantly 120, now rose to 150. Respiration became somewhat hurried.

January 10th. Three weeks after the accident. All symptoms had become

aggravated; the patient was delirious at times; the uterus had prolapsed; dejections were involuntary, and the pulse had risen to 168. During the night the respiration grew hurried, 44 in a minute, and became stridulous. The patient grew livid and unconscious, and early in the morning of January 11th tracheotomy was performed. The urgent symptoms were immediately relieved by the operation; the patient became conscious, and took some nourishment by the mouth.

From this time there was but little suffering; the pulse grew feebler and more rapid, and on the morning of January 12th, or twenty-three days after the accident, the patient quietly died.

An autopsy was not allowed.

Considering the extent of surface burned over, and the depth of the burns, the patient's vitality seems remarkable. There was no abdominal pain, vomiting, or diarrhoea, to arouse suspicion of intestinal lesion, although the deposit in the mouth was evidence of disordered digestion. There was no inhalation of flame, and the extension of this deposit may have been the cause of impending suffocation.

Cystocèle. — Grace P., a married woman, thirty-two years old, entered the hospital November 10, 1875. She had been married thirteen years, and had had two children and several miscarriages. Eight years ago her youngest child was born and her present trouble began. Now, upon any exertion, a round, soft tumor projects from the vulva and causes considerable pain. Vaginal examination showed the anterior wall of the vagina to be lax and flabby, and to prolapse upon the patient's standing. There were old scars on the os, but otherwise the uterus seemed healthy.

November 15th. The patient was etherized, and a piece of the mucous membrane of the anterior wall of the vagina, about two inches by one, dissected off. The edges of the wound were brought together with wire sutures, silk ones alternating. The bladder was relieved by the catheter.

Six days after the operation the stitches were removed; one or two sloughed, but no harm resulted.

Three weeks after the operation only a small granulating surface was left.

The patient had considerable trouble with cystitis, as urine formerly collected in the descending pouch; the bladder was washed out with Sir Henry Thompson's solution of carbolic acid.

Five weeks after the operation the patient sat up for the first time, and was discharged a week later.

February, 1876. There has been no return of the old trouble, but there is some leucorrhœa.

Refraction of the Arm. — Bridget G., aged ten, entered the hospital November 30, 1875. Three months before this she fell over some banisters, striking on her hand and breaking her fore-arm. The arm was said to have been set by a coroner. On examination the radius and ulna, about two inches above the wrist, were found bent towards the olecranon, making an angle of about 150° with the rest of the arm. The radius felt smooth as the finger was passed over its surface, but a distinct prominence could be felt upon the ulna at the angle. The hand and fingers were considerably flexed, could be

but partially extended, and immediately resumed their former position upon force being discontinued.

December 4th. The patient was etherized, and the arm forcibly straightened; the radius was bent into position, but the ulna was refractured. The hand and fingers were also straightened. Anterior and posterior splints were applied.

December 19th. Good union had resulted; the arm was perfectly straight; the fingers showed some tendency to become flexed, and the splints were reapplied.

December 24th. Passive motion applied to the fingers.

January 4, 1876. All apparatus left off; the arm was now straight and motion was good.

J. E. GARLAND.

LETTER FROM PHILADELPHIA.

MESSRS. EDITORS,—The Centennial Medical Commission has not yet published the final circular which will include the names of gentlemen who will address the International Congress next September. It is considered a wise plan, and it cannot be denied that it is so, to withhold this list until it be positively known who will deliver addresses, because the commission would surely be charged with uncertainty and the creation of confusion, were they to publish an imperfect list or one which it would be necessary to modify after what ought to be a final and definite announcement. The members of the commission are doing all in their power to forward and perfect the arrangements of the congress. But there are many impediments, and much waiting and annoyance are caused by the failure of correspondents to reply promptly to questions which must have an answer before a full and perfect programme can be published. These hindrances can be appreciated by those only who are doing the work. I would, then, bespeak patience for them on the part of those who are waiting to know just what is to be done and who are to address the congress.

Two editors are upon the committees, and since they counsel this withholding of imperfect intelligence, and since they themselves refrain from publishing matters which, as yet, are in embryo, the commission ought not to be criticised or deemed dilatory. It is thought that a correct programme of the entire plans of the commission will be ready in about a fortnight.

In the exhibition there will be an elaborate display of surgical instruments and appliances of every variety, and manufacturing chemists will exhibit full cases of their productions. There will also be a model army hospital under control of the government. The members of Dr. Pepper's centennial staff recently held a meeting to discuss plans and choose days of service. They were appointed as "assistant medical directors," but this title does not indicate the work they have to perform. They have therefore substituted that of "officers of the medical bureau."

At this meeting a plan of the centennial hospital was presented by Dr. Pepper. It will be a one-story building in the shape of a Geneva cross. It will have a roomy attic for ventilation-purposes and also to give coolness to

the wards. There will be a Pullman-car roof as an additional security against heat, and further, there will be a wind-sail, a nautical device in the shape of a canvas tunnel, which will pass through the roof and descend to within a few feet of the floor of the wards. At its weather-end the tunnel will be furnished with wings after the manner of wind-sails in general, and its mouth will be kept constantly turned towards the wind. The breezes thus being collected in large quantities will by their own force descend into the building. Those who have enjoyed the delights of a wind-sail in hot climates know what a luxury it is. The wards of the hospital will be small, having probably only two or three beds each, for the hospital is designed for temporary purposes alone, and patients will never be kept overnight, but will be sent away as soon as safety will permit. To this end at least two ambulances will constantly be at the call of the acting officer of the hospital. The term of service of each of the six members of the staff will be three hours every other day. The gentlemen who have been appointed to this service are Dr. R. G. Curtin, Dr. Samuel W. Gross, Dr. Herbert, Dr. Hamilton Osgood, Dr. Jacob Roberts, and Dr. Horatio C. Wood, Jr. Each officer will wear an appropriate badge in the shape of a small enameled Geneva cross, and will have the *entrée* of the exhibition at all hours. Medicines will be gratuitously furnished by Bullock and Crenshaw, Rosengarten and Sons, and others. A special room will be reserved in some portion of the hospital building as a place of resort, or rather, perhaps, a sort of *conversationssaal*, for any physicians (regular of course) who may be on the grounds. It has been also proposed by some ingenious individual connected with the exhibition (one gifted with a peculiarly keen sense of the internal fitness of things, and who made the suggestion in all earnestness) that space shall be provided in the hospital for the exhibition of *grave-stones and coffins*! What a square-faced undertaker, ghost, grave-digger, or dissection-room janitor that man would make! Somebody writes, "After all, the poet is the most practical of men; he sees life as it is." Imagine the intensely poetic fervor of this grave-stone man!

The plans of the Jefferson College Clinical Hospital, now in process of construction, indicate that it will be the most perfect structure for clinical purposes that has yet been erected. The auditorium will be remarkably easy of access both to students and to patients, and will accommodate six hundred listeners. The rooms of the building will be arranged most conveniently for the use of the various specialties, each suite being composed of a waiting-room and reception-room, and all communicating easily with the wards. There will be an elevator, water conveniences, etc., after the most modern and ingenious fashion. In a future letter, and after the completion of the hospital, I will give you details in full.

An enterprising photographer in town has conceived and carried into complete success the collection in a large album of the photographs of all the regular physicians of Philadelphia. None others will be admitted. Every physician whose photograph is used pays ten dollars for the privilege, and is besides presented with a twelve-by-eighteen photograph of himself for domestic use. Upon completion of the album a copy will be presented to the Smithsonian Institution, one to the College of Physicians of Philadelphia, one to

Jefferson Medical College, and one to the University of Pennsylvania. Like every other new thing now in motion here, this is a centennial project, and intended as a medical memorial of the centennium. Five hundred physicians have already consented to be photographed. The cards will be arranged in the album in order, following an alphabetical list of the names of the physicians, which list will be placed at the beginning of the album, each name having a number, which will be duplicated on the proper photograph. Copies of the album will be offered for sale at the exhibition. This opportunity to be handed down to posterity in fac-simile is too tempting to be resisted. The work is in the hands of a leading photographer, and will be well done. And to him belongs the credit of originating the idea; be kind enough not to attribute it to the physicians.

The report of the insane department of the Pennsylvania Hospital (commonly known as "Kirkbride's") for 1875 has just been published. The total number of patients during the year was 684; the highest number at one time, 450; the average number during the whole year, 430. There were 208 males and 222 females. Of the patients discharged during the year, 112 were cured; 27 were much improved; 39 were improved; 44 remained stationary; and 42 died. The whole number of patients since the opening of the hospital in 1841 is 7167. The report in its mention of the various entertainments, occupations, and amusements of the patients, refers especially to a school-kitchen for the preparation of "sick-diet," to be introduced as a means of giving useful occupation to patients capable of rendering assistance in this direction, their wish to do so being consulted. The expenditures for the year in the male department were \$102,644.11, of which \$8,161.92 were expended on free patients, who averaged 16 in number. The net receipts of this department were \$104,149.37. In the female department the expenditures were \$98,722.42, the receipts \$101,383.03. Free patients averaged 35 in number, and cost \$15,564.15.

An interesting centennial retrospect of the history of the care of the insane in the United States forms one chapter of the report. The fact is mentioned that previous to 1751 there was no regular provision for the insane in America. The first insane patient was admitted into the Pennsylvania Hospital February 11, 1752. Now, there are seventy-six public hospitals for insanity, with a capacity, when complete, for 30,000 patients.

In the trial of Rubenstein, the alleged (and now convicted) murderer of Sara Alexander, recently closed in New York, Professor Eaton testified concerning the character of spots of blood and splinters of corn-husks found on the prisoner's boots. After reporting this testimony the *New York Herald* published an anonymous article on blood-stains, which bore very heavily, very insultingly too, upon statements made by Dr. Joseph G. Richardson, of this city, who is a microscopical expert, and who wrote the excellent little *Hand-book of Medical Microscopy*. In a paper on blood-stains, published in the *American Journal of the Medical Sciences* in 1869, Dr. Richardson forbore to mention the names of those animals the size of whose blood-corpuscles so nearly resembles that of human blood-corpuscles, because he feared that the information might be wrongfully used, not only by criminals and those crim-

inally inclined, but also by unscrupulous lawyers. Medical men, he knew, would merely have to refer to physiological tables of the measurements of the red corpuscles of various animals. Whatever may be the general opinion concerning the position taken by Dr. Richardson, it simply showed the conscientiousness which is thoroughly characteristic of the man. But the writer in the *New York Herald*, who, for private and questionable reasons, chose to be anonymous, most unjustly, and apparently with a purpose which may be easily conjectured, attacks the truthfulness of Dr. Richardson, and, without literally calling him a liar, intimates that he is guilty of suppressing the truth, remarking that "he has falsely stated the issue." The opinion of Dr. Woodward, of Washington, D. C., which in the matter of distinguishing one blood-corpuscle from another is adverse to that of Dr. Richardson, is then given *in extenso*. But nothing is said of the acquiescence of Dr. Taylor (the celebrated writer on medical jurisprudence) in the opinions held by Dr. Richardson, and neither is mention made of the notice (of Dr. Richardson's defense of his position) which appeared in the *British and Foreign Medico-Chirurgical Review* for July, 1875, and which was as follows:—

"Dr. J. G. Richardson, in this short paper (The Diagnosis of Blood-Stains), defends his previous position from an attack made upon it by Dr. J. J. Woodward. Dr. Woodward maintains that we can never affirm truthfully, on the strength of microscopical investigation, that a given stain is positively composed of human blood. Dr. Richardson agrees with this as being literally true, but not the whole truth, because it often happens in practice that evidence other than microscopical narrows down the conditions of a case to the question, Is this stain human blood or that of an ox, pig, or sheep? The question thus narrowed can be answered by the microscopist, according to our author, and we entirely agree with him. We further agree with him in the caution he displayed in his former paper in not suggesting to the criminal population what bloods of inferior animals are difficult of differentiation from human blood." This independent and valuable testimony in behalf of Dr. Richardson was left unnoticed by the *Herald*. Dr. Richardson addressed that paper, protesting against the anonymous article in which he was so discourteously treated, and, while he felt that the writer was beneath the dignity of a reply, took occasion to restate his views, making use of the favorable opinion of his papers expressed by Taylor and the medical quarterly above mentioned, whereupon the *Herald* in an editorial politely (!) remarks that Dr. Richardson appears to be innocent-minded, of good intentions, but behind the times, and asks whether it could be supposed that a criminal would kill a dog in order to make evidence with his blood, when it is known that murderers always expect to escape detection; it also remarks that Dr. Richardson's silence in regard to certain animals was not at all complimentary to the scientific readers of his papers. This is merely an evidence of the justice which one meets at the hands of newspapers. The worst feature of the whole matter is that the candor and truthfulness of an honest and earnest worker in medical science have been wickedly and unjustly assailed. While he withheld the names of animals whose blood he feared might be wrongly used by criminals, Dr. Richardson at the same time frankly admitted that there were animals whose blood-corpuscles could not be distinguished from

those of human blood, and he has carefully stated his reasons for not naming them in his early paper. To call this dishonesty, false statement, suppression of the truth, etc., is a wrong to a good man, is nonsense, and is unworthy of a newspaper which lays any claim to character. X.

PHILADELPHIA, February 19, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING FEB. 19, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	567	28
Philadelphia	800,000	337	22
Brooklyn	500,000	233	24
Boston	342,000	176	27
Providence	100,700	30	15
Worcester	50,000	18	19
Lowell	50,000	12	13
Cambridge	48,000	18	19
Fall River	45,000	15	17
Lawrence	35,000	7	10
Lynn	33,000	11	17
Springfield	31,000	11	18
Salem	26,000	9	18

Normal Death-Rate, 17 per 1000.

BOOKS AND PAMPHLETS RECEIVED. — De l'Anæsthésie produite par Injection intra-veineuse de Chloral selon la Méthode de M. le Professeur Oré. Par V. Deneffe et A. Van Wetter, Professeurs à l'Université de Gand, etc. Bruxelles. 1875.

Transactions of the American Ophthalmological Society. Eleventh Annual Meeting, Newport, July, 1875. New York: William Wood & Co. 1876.

On the Extirpation of Enlarged Lymphatic Glands. By Rushton Parker, M. B. F. R. C. S. (Reprinted from the Liverpool and Manchester Medical and Surgical Reports. 1873.)

A Criticism of Esmarch's Elastic Compression. By Rushton Parker, M. B., F. R. C. S. (Reprinted from the Liverpool and Manchester Medical and Surgical Reports. 1875.)

Veratrum an Antidote to Opium. By J. S. Todd, M. D. (Read before the Atlanta Academy of Medicine.)

Filth-Diseases and their Prevention. By John Simon, M. D., F. R. C. S., Chief Medical Officer of the Privy Council, etc. (Printed under the direction of the State Board of Health of Massachusetts.) Boston: James Campbell. 1876.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held on Monday evening, March 6th, at eight o'clock, at the hall in Temple Place. Dr. F. H. Brown will read a paper on Arsenical Wall-Papers.

ERRATA. — In JOURNAL of February 24th, on page 210, thirteenth line, for "Moyan" read Morgan; and on page 212 the second and third paragraphs should be in quotation marks.

It is proposed to prepare a second revised edition of the United States Medical Directory. Physicians who have commenced practice or changed their place of residence during the past three years are requested to forward notice of such changes to the office of the Medical and Surgical Reporter of Philadelphia.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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CARIES OF THE CERVICAL VERTEBRÆ.¹

BY S. G. WEBBER, M. D.

CARIES of the cervical vertebræ is less frequent than that of the dorsal. It has, however, been my fortune to see several cases; the following is by far the most interesting, on account of its long duration, its apparently near approach to recovery, and its fatal termination.

The patient, three and a half years old when first seen, March 8, 1873, was placed under my care by Dr. E. H. Clarke. She had two brothers and one sister, all healthy except the younger brother, who had a very large head and had had convulsions. When about three or four months old she fell off the bed, but received no bruises. When about six months old she had diarrhœa, a purulent discharge from the ears, and three or four boils, being sick about four months; she then regained her strength and flesh. When she first began to walk, at about fourteen months of age, she held her head down and to the left side, the face not being turned to the left; later, the chin was allowed to drop on the chest; she would raise it for a short time and then drop it again. In the act of walking the left side was advanced slightly in front of the right. The patient walked strongly, and did not fall more than other children; she did not venture to climb like the others; there seemed to be timidity rather than weakness. When her hand was being washed, she drew it back as if she was hurt. She preferred to lie on her stomach; she made no complaint of pain, and did not seem to have headache. The discharge from the ears ceased before she began to walk.

When about two and a half years old she fell from a chair; soon after, in March, 1872, she seemed easily tired, was less inclined to walk, and preferred to lie on the bed. The inside of the right hand was noticed to be decidedly tender to touch, though not excessively so. Weakness of both arms and both legs slowly increased, till there was complete paralysis of the lower limbs, and almost complete paralysis of the upper. The legs were affected by spasms, becoming rigid; they were drawn up, and, if not supported, trembled when flexed. There

¹ Read before the Boston Society for Medical Improvement.

was no pain, nor tendency to rub or scratch any part as if in discomfort. There was strong resistance to any passive motion of the head, though it could be moved voluntarily.

When first seen the patient was lying on her back, not able to move her legs nor to turn over. The power of moving her upper extremities was very limited. Her hands were nearly useless; only very light and large objects could be held in one hand; most things were caught in a helpless way with both hands; small objects could not be held. The motions of the fore-arm and arm were nearly all retained, but were very weak.

Reflex action was exaggerated, both legs being forcibly drawn up on tickling the soles of the feet or on pinching the legs; she complained of pain when this was done. When the knee was bent and the foot was allowed to rest on the bed, the leg trembled very much unless it was supported. Sensation was preserved in both legs and arms, but to how great an extent could not be told, owing to the child's age. There was no tenderness over the spine. When the patient sat up it was necessary to support the back, which was much curved in the dorsal region; there was no other deformity in the spine. Her head fell forwards, and she complained of pain in her back; her respiration was then interfered with, seemingly from mechanical causes. The abdomen projected very much, the intestines being filled with gas.

The muscles of the legs responded to the faradic current, though somewhat sluggishly; the same was the case with those of the right arm; those of the left arm responded better. The bowels were rather costive, and the urine could not be retained long.

The child was taking iodide of sodium and cod-liver oil, and had had her neck painted with tincture of iodine. I ordered the iodide and oil to be continued, added phosphate of lime, and a blister one inch square to the back of the neck, to be repeated just below the first, after that had healed. An apparatus was applied which should keep the head nearly immovable.

Nearly three months after the child was first seen, it was recorded that she could move both legs at will in flexion and extension while lying on her back. Her father noticed that the return of power was gradual, and that at first the limbs were moved intermittingly; at times they were paralyzed, at other times they could be moved. Improvement was slow but constant.

About the middle of July the patient was sitting in a high chair, and was pulled over by her brother. She fell on him, bruising her forehead. Next day her mother noticed a swelling on the left side of the neck, about as large as a pigeon's egg. When I first saw her there had been a swelling on the left side, seemingly an enlarged gland. The swelling increased in size, and in two weeks was about as large as a turkey's egg,

filling the space between the clavicle and the scapula, and extending up the neck not quite to the lower jaw. There was no pulsation; fluctuation could be perceived over the carotid, and a murmur, synchronous with the pulse, could be heard over its anterior edge. The circumference of the neck over the tumor was twelve and one half inches. There was a slight tenderness over the fifth and sixth cervical vertebrae, and slight deformity; the position of the child's head had changed, and become quite characteristic by its set stiffness.

August 1, 1873. Dr. Hodges saw the child, diagnosticated the tumor to be pus from diseased vertebrae, and advised that it should be let alone for the present.

The next spring the child had whooping-cough, some of the paroxysms being very severe. When seen next, she could walk holding by her mother's hand, and could take a few steps alone. The swelling had increased in size, the neck measuring fourteen inches in circumference.

April 7, 1874. The swelling was slightly less in size, the neck being thirteen and one half inches in circumference; the abscess was slightly lobulated, was very movable, and seemed encysted; it resembled a fatty tumor. Dr. Hodges punctured it with the aspirator, and drew out about two ounces of pus. The abscess did not fill again, but the tract of the aspirator needle became fistulous.

May 25th. Dr. Hodges enlarged this opening and thoroughly evacuated the abscess; the contents were in large part concrete and cheesy. The cavity of the abscess filled up; it was firm and hard to touch, and gradually diminished in size.

November 4, 1874. Only a small, hard lump remained; the circumference of the neck was eleven inches. The child at that date walked firmly; her legs were well developed, the flesh was firm. Both legs were of the same size and length, but the motions of the right leg were a little less perfect than those of the left leg. The arms were not very strong, yet she could use her hands and fingers very well.

When I first saw the child I was chiefly interested in the diagnosis; my opinion was that there was caries of the fifth or sixth cervical vertebra. Paralysis of both legs in a child could be caused by disease of the spinal cord, of the base of the brain, or of both cerebral hemispheres; or it might be the result of so-called reflex paralysis, depending upon the disease of some other organ than the central nervous system. The diseases of the encephalon which might cause bilateral paralysis in a child are comparatively few; they must be either near the median line, as at the base, or multiple. Acute affections were excluded by the mode of origin and duration of the disease. There remain to be considered chronic hydrocephalus, multiple tumors or a single tumor at the base pressing upon both sides, and the possibility of some interstitial change, as sclerosis or granular degeneration, at the base.

Tubercular tumors are not infrequently multiple in children, and it is quite possible that bilateral paralysis might be caused by them. Yet the symptoms in such a case would differ essentially from those present in this case. The paralysis of the legs was complete, and greater than that of the arms, not the slightest voluntary motion being possible in the former. Such absolute loss of motion in the legs with the retention of so much power in the arms would scarcely be possible in case of tumors of the brain. Dr. West says the paralysis is often limited to the arm and hand, and invariably affects the upper more than the lower extremities. In cerebral tumors it is in the highest degree improbable that there should have been such entire freedom from all head symptoms. Such an absence of cerebral symptoms is of itself sufficient to exclude disease of the two hemispheres in cases of such absolute loss of control over the limbs.

The paralysis due to chronic hydrocephalus is accompanied with symptoms of cerebral disturbance which would scarcely admit of an error in diagnosis. In one case which I saw there were many symptoms resembling those of the present case; but there were also convulsions, vomiting, headache, strabismus, amaurosis, deformity of the head.

An organic change in the neighborhood of the pons Varolii or medulla oblongata might give rise to paralysis. The discharge from the ears would add to the likelihood of this. It seemed to me that the cause of the symptoms was below these points. There had been no convulsions, no vomiting. None of the nerves arising from the medulla oblongata were affected; the change in respiration seemed owing to mechanical obstruction rather than to loss of nervous influence, and there was no paralysis of the diaphragm. The only symptom present which could with certainty be referred to a higher origin than the fifth cervical nerve was the position of the head, inclined to one side and bent forward. This position of the head could be explained without supposing a lesion of the upper cervical nerves. For these reasons organic change situated so high seemed unlikely.

Again, the only changes likely to be met in so young a patient are abscess or tubercular disease. Tumors other than tubercular, and the more slowly developed consequences of a chronic interstitial change, are rare at so young an age.

As to so-called reflex paralysis, every organ seemed to be in perfect health, excepting the intestines. There was a great accumulation of gas in the intestines, with a proportionate distention of the abdomen, and constipation. But this condition arose subsequently to the other symptoms; it was rather the effect of the paralysis than the cause. There was nothing abnormal about the urine. Reflex paralysis would not have presented the earlier symptoms, tenderness of the hands and peculiar carriage of the head. It is very unusual to have all the limbs affected in reflex paralysis.

Of paralysis due to disease of the spinal cord, infantile paralysis was excluded by the mode of origin, which in that disease is sudden and acute, and by the fact that all the muscles reacted to the faradic current.

Apart from infantile paralysis, I do not recall any instances of myelitis of spontaneous origin in so young a patient. Dujardin Beaumetz¹ does not mention a case, and of twenty-eight cases in which the age is noted, none are mentioned below the age of ten years; between ten and thirty years twenty cases were noticed; the remaining eight occurred between the ages of thirty and seventy. All the cases under ten years of age are mentioned as infantile paralysis.

The history of this case excluded acute myelitis or meningitis, primary or secondary, as the spinal symptoms were developed very gradually. When six months old the child had diarrhœa, boils, a discharge from the ears; she was sick four months at this time, but she seemed to recover fully, and subsequently walked until she was two and a half years old, after which the paralysis was noticed, and in about ten months became complete in the lower extremities. Paralysis of spinal origin follows acute diseases as a result from changes in the spinal cord secondary to the acute disease. These cases may be more or less acute, or may be chronic. It is, however, not at all likely that in such an instance the paralysis would first appear in a marked degree as late as two years subsequently to the acute disease. Moreover, the symptoms of tenderness of the hands and the peculiarities noticed in the position and motions of the head are not found in paralysis after acute diseases.

Paralysis due to chronic changes in the cord, such as are found in the adult, is almost unknown in childhood. A tumor pressing upon the cord is also little likely to occur at such an early age.

Spondylarthrosis is essentially a disease of childhood. E. Leyden² describes the symptoms of this disease remarkably well. One of the earliest signs is pain; not pain at the seat of the disease, but along the course of the nerves and at the periphery. This pain is felt in the course of those nerves which have their origin from the part of the cord affected.

Another early symptom is the readiness with which the patients become tired, "so that they cannot run about nor stand long at a time;" the gait becomes unsteady and peculiar, from the contraction of muscles to steady the diseased vertebrae. Motor disturbance increases until the most complete paralysis may follow.

A frequent and valuable symptom is increased reflex irritability. Later, the limbs may be contracted, the leg being flexed on the thigh and the thigh on the pelvis. These contractions can be passively overcome, if at all, only by causing pain to the patient.

¹ De la myélite aiguë. Paris. 1872.

² Klinik der Rückenmarks-krankheiten.

On reviewing the present case it will be seen that there are no symptoms inconsistent with vertebral caries ; but, on the contrary, they are fully explained by such a lesion.

Not to dwell too long upon the various symptoms, it may be mentioned that in the earlier stage the peculiar position of the head, avoidance of such free motions as are required in climbing, tenderness of the hands, preference for the unnatural position on the stomach, are valuable as showing that the first fall at four months of age caused injury from which recovery was not complete.

After the second fall, at two and a half years of age, the symptoms were more marked. It is necessary to briefly enumerate only : the child seemed more easily tired, preferred to lie on the bed, and was disinclined to walk ; the inside of the right hand was decidedly tender ; passive motion of the head was strongly resisted ; the arms and legs became gradually weak until they were in the condition in which I found her. The legs were affected by spasms, the reflex action being exaggerated. There was no tenderness over the spine, and no deformity except the bulging of the back, when she sat up, from paralysis of the muscles which retain the vertebral column erect.

As the nerves were compressed by the inflamed tissue around the intervertebral foramina, they were irritated ; hence the hyperæsthesia. In an adult, who could tell of changes in sensation, we should hear of other abnormal sensations at the periphery. The head could still be moved on the healthy joints, the diseased joints being kept immovable ; but when an effort was made at passive motion the inflamed joints would be moved as well as the healthy, hence the resistance to passive motion.

When I saw her first, the lower part of the cord was virtually cut off from the brain at the point of disease ; hence the exaggerated reflex action. There was sufficient irritation of the cord to produce contraction, or there was change in the lateral columns. As she subsequently so fully recovered, the latter is not probable.

My diagnosis, then, of vertebral caries is justified by an analysis of the symptoms. The locality of the disease was evidently in the cervical region. There was no interference with the respiration, except mechanically when the head fell forwards ; the diaphragm acted well ; none of the cranial nerves were affected ; deglutition was normal. The tenderness of the hand in the earlier stage would indicate that the disease was at the point of exit of the brachial plexus, probably not higher than the middle of the cervical enlargement. As all the muscles of the upper extremities were partially paralyzed, it must be that when I saw the child the whole or nearly the whole of the brachial plexus was involved. I thought, therefore, that the disease began at the level of the fifth or sixth cervical vertebra.

It is interesting to notice that there was no pain on pressure over the

diseased bone, and no deformity at the time of my first visit. It is not to be expected that in the earlier stages of Pott's disease there should be deformity, for until the vertebrae yield there can be none. In the early stages, moreover, the disease, being in the bodies of the vertebrae, is removed from the influence of pressure upon the spinous processes. The arch of the vertebra being healthy, and a large part of the body still unaffected, the pressure is upon healthy parts, and the diseased portions have not become so degenerated as to receive painful impressions from steady pressure. It might be that percussion would cause an aching.

After I saw her, she steadily improved; I believe the improvement commenced before an apparatus was procured. Supposing the pus from the diseased vertebrae pressed upon the cord, and hence caused the paralysis, when exit was obtained for the accumulation this pressure would be relieved. It was not until the pus had found its way into the loose tissues at the side of the neck that tenderness was noticed over the spine, and, about the same time, deformity. Then the bodies of the vertebrae yielded; yet the power of motion in the limbs steadily improved, showing that deformity of the vertebral column was not the cause of the paralysis. The paroxysms of the whooping-cough caused the tumor in the neck to increase quite rapidly in size; at the same time the motor power of the legs rapidly improved. It would seem as though the effort of coughing aided in expelling the pus.

I have spoken of compression of the cord from accumulation of pus in the vertebral canal. Of course I mean between the bone and the periosteal layer of the dura mater. This is only a supposition; compression is not always present in vertebral caries. From the nearly complete recovery, the commencement of which was followed by the appearance of pus at the side of the neck, it is probable that in this case some of the symptoms were due to compression by the pus; but generally these are caused by the irritation of morbid products or by inflammatory and other nutritive changes.

The amount of such change is not in proportion to the amount of compression. I believe there is no means of judging, clinically, as to how great the compression has been. We can conclude from the course of the symptoms only whether the progress of the secondary changes is rapid or slow.

The pus which found its way into the neck became encysted, and seemed to be cut off from the source of supply in the vertebrae. At the autopsy, no connection was found between the vertebrae and the seat of the abscess. Indeed, the results of the operation showed that the connection had been closed by nature. In view of this fact, and considering the subsequent recovery of motion and of strength, and the development of the legs and arms, it was reasonable to suppose that the disease had ceased to advance, and I confidently expected complete recovery.

In regard to the place at which the pus pointed. I have seen one other case similar to this. Leyden¹ describes the course taken by the pus. He says that in disease of the cervical region, as a rule, it passes down behind the longus colli muscles and appears at the posterior wall of the pharynx. In other cases, it sinks more to the lateral portion of the neck, and comes out at the sterno-mastoid above the clavicle, or finally, following the course of the brachial plexus, points in the axilla. The pus from the lower cervical and upper dorsal vertebrae has generally the longest course to follow. As the longitudinal ligament is thickened it presents an obstacle to the passage of the pus into the thoracic or abdominal cavities, and so it slowly settles down and appears under Poupart's ligament, having followed the femoral vessels.

The further history of my case is as follows.

In April, 1875, the patient had measles, with others of the family. The eruption was pretty well developed. She was under the care of a homœopath during this sickness. From her father I learned that the symptoms were mild until the eruption was fading from the face. Then there was pain in the head, alternating with pain in the stomach, and a condition of half stupor. The prominent symptoms were cries as if from pain, moaning, a tendency to sleep, pulse 130 to 136, respiration 53, slight spasm in the left hand, dilated pupils, flushed face. About the last of April the left arm was contracted, the right arm seemingly paralyzed; there was no motor disturbance of legs. There was much timidity, and the child would call out nervously to be laid lower or higher.

May 10, 1875. I found her in bed on her back, both arms drawn up about equally, the fingers of left hand used in rubbing her face, those of right hand not used. The pupils were both large, the iris responded feebly to light. Any motion of the head and coughing caused her to cry out. The left leg was drawn up, but could be easily straightened. There was no exaggerated reflex action on tickling the legs, but she cried out as if in pain. There was slight strabismus, which the father said had been more marked. Pulse 138. Respiration 27.

She remained very nearly in the same condition, temporarily improving, though finally becoming rather worse, her condition varying slightly from day to day. The cough was the most distressing symptom, because by its convulsive jar pain was caused. There was frequent vomiting.

During the early part of June she had attacks of vomiting; she cried out, became delirious, and rolled her eyes about. These attacks recurred regularly every fourth day. As she had been with the rest of the family in a part of the country where intermittent fever prevailed,

¹ Klinik der Rückenmarks-krankheiten, i. 224. See also Otto Saltmann, Ausbreitungsbezirke der congestions Abscesse, Jahrbuch der Kinderheilkunde, 1874, page 267.

and as other members of the family had had chills and fever, I prescribed quinine. Twenty to thirty-six grains given the day before the expected attack modified it, but did not prevent its occurrence. In some of the attacks the face was drawn to the right, and between the attacks there was paralysis of the right side of the face.

June 12th. Dr. E. H. Clarke saw her in consultation, and advised to continue the quinine, and to increase the dose of iodide of sodium until ten grains were taken three times a day. The attacks of vomiting, with unconsciousness, continued to recur, though less severe than at first.

June 25th. Bromide of potassium was given, beginning with six grains three times a day, and rapidly increased to twelve grains. Subsequently the dose was reduced to ten grains, and then to eight. Soon after this, the vomiting ceased.

During the latter part of June the arms and legs became relaxed, and until death there was complete paralysis without contraction of all the extremities, and only the very slightest trembling on tickling the feet during the earlier months of that time, with occasional spontaneous twitching of the legs.

In the middle of July bed-sores formed; several began as blisters, then the cuticle came off and a slough was seen at the base. These formed on parts which were exposed to pressure for a short time only, or even where there seemed to have been no pressure. The nursing was admirable, and none of the bed-sores attained any large size. As fast, however, as one healed others formed. Towards the end of life there was an unnatural growth of hair on the limbs and on the labia.

Shortly after the middle of August she had attacks differing from previous ones, recurring at varying intervals. She exclaimed first, "Oh! oh! oh!" then there was profuse sweating, confined to the face and neck; after that the face and neck became mottled with red, resembling scarlatina eruption. There was no increase of drowsiness, nor any vomiting. Bathing the head with cold water seemed to cut these attacks short.

During the second week in September there was much dyspnoea, with coarse râles in the throat, and a pulse so rapid that it could not be counted. Respiration 50 to 66. The father thought she had taken cold. More stimulants were used. In about two weeks the child's condition was nearly the same as previous to this attack, and did not vary materially until death. About a week before she died there was a spasm of the facial muscles, and in the night in which she died the same was noticed again. Respiration was chiefly abdominal after the early part of July.

On October 10th the actual cautery was applied to the neck over the diseased vertebrae. After this the child seemed brighter, and the bed-sores healed rather more quickly. That, however, may have been in

consequence of quinine, which was given again in doses of two and three grains.

During the summer and fall, excepting when she had the attacks mentioned above, her intelligence was good. While taking large doses of bromide she was rather apathetic; but after the attack of dyspnoea in September she was very intelligent, noticed what was done in the room, responded to noises made in the house, and noticed what was said by her brothers and sister in the entry. She also repeated poetry she had learned previously.

The bowels were sluggish during most of the time, with only one or two periods of looseness. The urine was passed frequently, seemingly with pain; there was no accumulation in the bladder. For a while there was a rich deposit of urates and phosphates; they collected on the cloths and on the surface of the legs and genitals. I was in doubt as to how much of this might be due to the diet, which at that time was largely composed of beef-tea. The food was changed, more water was given to drink, and there was soon a change for the better.

December 20, 1875, she died. An autopsy was made about nine hours after death. There was great emaciation. Large parts of both lungs were collapsed, containing no air; portions cut from these parts sank in water. The kidneys, intestines, stomach, and liver seemed healthy. The heart was not examined.

On either side of the vertebral column in front was a small sac containing caseous pus, each about an inch and a half long and about three fourths of an inch wide, hanging down from the fifth or sixth cervical vertebra. At their upper limit these two sacs were united by a bridge of pus about half an inch wide, which took the place of the bodies of one or more degenerated vertebrae. There was considerable deformity of the vertebral column in the lower cervical region, the arches of the fourth and fifth cervical vertebrae falling forward. The arches of the fourth, fifth, sixth, and seventh cervical and of the first and second dorsal vertebrae were ankylosed one with the other. The bodies of the vertebrae were sawed through on the median line, and the laminae were sawed just to the left of the spinous processes. On the left half the body of the third cervical vertebra was found to be much diseased, but clearly discernible; the intervertebral cartilage between the third and fourth vertebrae could also be seen. The bodies and cartilages of the fourth, fifth, sixth, and seventh cervical and of the first and second dorsal vertebrae could not be distinguished, and about half the body of the third dorsal was destroyed. The intervertebral foramina between the fourth and fifth, the fifth and sixth, and the sixth and seventh cervical vertebrae were united into one cloaca by the destruction of the pedicles of the respective vertebrae. The transverse processes of all the vertebrae were present. There was no bone between the transverse process of

the sixth and seventh cervical vertebrae and the collection of pus. On the right the condition of the bodies was the same as in the left half. A few small loose pieces of bone remained embedded in the thickened pus. The transverse processes were all present, but those of the sixth and seventh cervical vertebrae were imperfect. The pedicles of the sixth and seventh vertebrae were represented only by pieces of bone disconnected with the rest of the vertebrae. The greatest amount of disease was at the level of the sixth and seventh cervical vertebrae. The bodies and pedicles of these two vertebrae had entirely disappeared; also the articulating process of the sixth with the fifth could not be clearly recognized on the right: it was at least in part diseased. This extensive destruction allowed the fifth vertebra to slide forwards. On the left, the articulating processes from the fourth cervical to the second dorsal vertebra were ankylosed. On the right, probably those of the fourth and fifth cervical vertebrae were ankylosed; also those of the seventh cervical and the first and second dorsal. The fifth cervical nerve was comparatively free, the intervertebral foramina through which the sixth and seventh cervical nerves passed were very much narrowed, and it would seem that those nerves must have been compressed. The first and second ribs were crowded together.

The canal was somewhat narrowed opposite the fifth cervical vertebra by the projection forward of the posterior portion of its arch.

The spinal cord was decidedly swollen in the region of the lumbar enlargement, and somewhat so above. It completely filled the vertebral canal at the level of the diseased vertebrae. At the level of the atlas, where divided, it was unusually firm, but to the naked eye showed no special change. The dura mater was firmly adherent to the pia mater throughout. In the dorsal region was a cavity occupying the locality of the central canal, and about one third the diameter of the cord. This cavity extended into the cervical enlargement, but not above; was not noticed in the lumbar enlargement. The cord below the cervical enlargement was abnormally soft. On examination in the fresh state, no nerve-fibres could be found in either the cervical or the lumbar enlargements.

Owing to lack of time the head was not examined.

No pus was found outside the two sacs above mentioned by the sides of the vertebral column.

There was no fatty nor granular change of the muscular fibres from the rectus femoris. The fibres were very narrow, most of them striated; many did not show transverse striæ, only longitudinal. There was no multiplication of nuclei in the sarcolemma.

Of the symptoms present after the measles, and subsequent to the acute attack of cerebral disturbance, nearly all can be explained by the disease in the cord. There were only a few distinctly marked head

symptoms. The paralysis of one side of the face was the most clearly defined of these. There were also sometimes delirium and unconsciousness. The strabismus might be called a cerebral symptom, but it is often reflex in children, and Dr. Charles S. Bull¹ mentions that he has seen strabismus in two cases of vertebral caries. As it was not constant in the present case, and at no time was very severe, it could not have been due to a permanent lesion of the sixth nerve.

The dilated pupils, sweating, flushed face, and rapid pulse were undoubtedly dependent upon lesion of the sympathetic. The vomiting might have been dependent upon irritation of the phrenic or of the sympathetic. The attacks which recurred every fourth day I considered at first to be intermittent in nature, but finding that quinine did not prevent them, I thought they might be epileptiform, and so gave the bromide of potassium, with benefit.

The spinal symptoms during the latter part of life were caused by meningitis and myelitis, not by compression. At first there was pain and contraction; later, when the conducting power of the cord was destroyed, entire loss of all motion, active or reflex.

GYNÆCOLOGICAL NOTES.

BY F. K. BAILEY, M. D., OF KNOXVILLE, TENN.

CASE I. *Imperforate Hymen*. — A girl of sanguine nervous temperament, fourteen years of age; large and stout, and of a good constitution. Had been in the vicinity a few months only, and it was ascertained that, although every month there had been symptoms of menstruation, yet "nothing had been seen." When summoned, I found the girl in intense agony, the pain referred to the pelvic regions and attended with bearing down efforts. Suspecting the cause, I made an ocular examination, and found, on separating the labia, a fluctuating tumor occupying the vaginal ostium. With the assistance of a medical gentleman who was called in to give his opinion, an opening was made in the middle line with a bistoury; there gushed out with considerable force, in a full stream, nearly a quart of a dark brown, almost inodorous fluid. The pain was relieved immediately.

Dark coagula continued to escape for several hours. A lotion of carbolized water was ordered, to be used freely, and at the end of five days there was still some discharge. At the close of another week, all discharge had ceased, and no further trouble was complained of.

In a month from the time of the operation, menstruation occurred normally, and no subsequent obstacle has presented.

The friends had noticed a slight enlargement of the lower abdomen

¹ American Journal of the Medical Sciences, July, 1875, page 60.

for some time previous to calling in medical advice, and it is probable, from the history of the case, that for months there had been a slow accumulation of menses, which the vagina had tolerated. When, however, it became necessary for the uterus to contain and store the accumulation from month to month, forbearance ceased, and expulsive efforts awakened attention and necessitated operative interference.

CASE II. *Stricture of the Vagina.* — A few years ago I was invited by a medical friend to visit with him a lady, in whose case he desired both advice and assistance. I found a remarkably well-developed and intelligent young woman, not over twenty-two years of age. She had been married six weeks. The object which she had in calling a medical adviser was to be relieved of a condition of the ostium vaginæ which had rendered sexual connection impossible.

On examination, I found the external opening of the vagina to be narrowed so as not to admit the end of a finger. There was an intolerance of the least effort at digital manipulation, and an operation was decided upon at once. I administered chloroform, and after the patient was completely under its influence Dr. — made a lateral incision upon each side, and at an angle of about 30° posteriorly. There was considerable hæmorrhage, as the parts were vascular and somewhat congested. The operation was performed at three P. M. and at nine P. M. a medium-sized rectal speculum was introduced, which caused some pain, but dilated the parts very effectually.

I will add some items in the personal history of this lady, which may be of interest. She menstruated at the age of eleven years, and became at once a sufferer from dysmenorrhœa, and also from a retention of the menstrual fluid within the vagina by the closure of the sphincter, which, though not complete, was sufficient to cause trouble. Moreover, at the menstrual periods she suffered from a "cramping" of the flexors of the toes. This was not confined to the period, but was induced by any unusual excitement; it was especially obvious after her marriage, upon any attempt at coitus.

Nothing has been heard from the parties since a short time after arriving home, when the accounts from the patient were entirely favorable. I will add that the contraction was so firm that the part resembled, on digital examination, the mouth of an India-rubber tube, one half-inch in diameter.

RECENT PROGRESS IN ANATOMY.¹

BY THOMAS DWIGHT, JR., M. D.

TERMINAL ORGANS OF SENSORY NERVES.

As is well known, these are of three kinds: the terminal bulbs of Krause (*Endkolben*), the tactile bodies of Wagner and Meissner (*Tastkörperchen*), and the Pacinian bodies, besides those belonging to the nerves of special sense. The structure of the Pacinian bodies is the best understood, but even in these, as in the others, the ultimate termination of the nerve may be looked upon as rather doubtful.

Terminal Bulbs of Krause. — There has been much discussion concerning Krause's terminal bulbs in the conjunctiva, and some three years ago the question was investigated by Cicaccio and Waldeyer, who arrived at opposite results. Cicaccio found them, and described them very accurately in an excellent monograph on the conjunctiva, published in the Memoirs of the Academy of Bologna; but Waldeyer has till of late denied their existence. The work has been done again quite independently by Dr. Longworth,² of Cincinnati, in Waldeyer's laboratory, and by Professor Poncet,³ at the Collège de France; and except in some points of lesser importance their results agree together, and with those of Cicaccio. To state the conclusions briefly, in man these organs are spherical or ovoid bodies filled by one or more nerves coiled and twisted into inextricable snarls; according to Poncet, these are imbedded in a granular substance containing large nuclei, of which those on the surface appear to be connected by a delicate membrane. Longworth points out that in the conjunctiva of the calf these bodies are very much more elongated than in that of man, and consist of a ground-substance that is either homogeneous or faintly granular, while in man it is made of nucleated cells pressed closely together and containing some fat-globules. He finds also that in the calf the nerve does not form a coil, but runs straight through the centre, and for these reasons he classes the elongated bulbs of the lower animal among the Pacinian bodies, and the round ones of man among the tactile corpuscles. In both kinds he finds two membranous sheaths, the inner of which comes from the sheath of Schwann, and the outer from the neurilemma; both contain nuclei which are much less distinct in man than in the lower animals. Waldeyer publishes at the end of Longworth's paper a supplement in which he vouches for its correctness, renounces his unbelief, and adds some observations of his own which are important if true. He states positively that the nerves, after subdividing in the corpuscle, end in the interior of individual cells.

¹ Concluded from page 244.² Archiv für mikroskopische Anatomie, band xi., heft 4.³ Archives de Physiologie, Août et Septembre, 1875.

By the kindness of Dr. G. K. Sabine, I have been able to examine several very good specimens made by Dr. Sabine in Waldeyer's laboratory. After careful study with both low and high powers I am inclined to doubt the existence of more than one sheath, therein agreeing with Cicaccio and Poncet. I am unable to convince myself that the ground-substance is composed of cells, and can see no trace of Waldeyer's nerve terminations. After these studies, that agree entirely with those of other observers, it is hard to consider Figure 6 in Longworth's paper, which was apparently inserted by Waldeyer, as other than the diagram of a delusion. It should be stated that both osmic acid and gold chloride are useful for the demonstration of these organs; after using the former, another staining agent to color the nuclei is desirable. These bodies are not evenly distributed throughout the conjunctiva, but are found much the most plentifully in the upper and outer part.

Tactile Corpuscles. — Merkel's¹ discussion of these bodies is interesting in connection with what precedes. There are many points with regard to their structure which are far from settled; but it may be roughly stated that they are generally believed to be composed of masses of cells among which the nerves are lost, that these groups have either a true capsule or a peculiar arrangement of the connective tissue around them which amounts to the same thing, and that they may be subdivided by fibrous partitions so as to be simple and compound. Merkel goes further, and asserts that simple ones, and these he holds are not rare, consist each of a single cell. Then there are two cells together, and then more, and the larger the group the more obscure its structure, owing to its envelope. The cells themselves resemble in size and appearance the nerve-cells of the ganglia of the roots of the spinal nerves, and, what is most important of all, Merkel finds, and Waldeyer confirms it, that nerve-fibres run into the substance of the cells. Merkel's observations extend through a large number of animals. The tongues of swimming birds offer excellent specimens of solitary cells. These are found in the true mucous tissue below the epithelium; but in mammals they are nearer the surface, and may be found in the rete mucosum. Cells of this kind, with nerves entering them, are found in the sheath of the hair-roots, being best shown by sections parallel to the surface. In some places, as in the beak of a fowl, they are found in the mucous part of a papilla, in large numbers, but near together, without being collected into a compound corpuscle. Individual cells of this kind are found also in the rete mucosum of the human skin, but it is proper to state that it is only in some of the lower animals that the intimate relation of the nerve has been demonstrated.

Merkel divides the various cutaneous terminations of nerves into two

¹ Archiv für mikroskopische Anatomie, band xi., heft 4.

classes. The first consists of the simple cells and compound tactile corpuscles; in other words, of those in which the nerve is supposed to end in a cell; the second class consists of free endings, Pacinian bodies and Krause's bulbs. If it should be proved that Waldeyer is correct in asserting that nerves end in the cells of Krause's bulbs of the human conjunctiva, of course it will be necessary to place these bodies in the first of Merkel's classes. Merkel concludes his paper with the opinion that the free termination of nerves in the skin is for the perception of temperature, and the endings in cells are for the sense of touch.

Pacinian Bodies.—Professor Rudolf Arndt¹ has studied the development of these structures in the mesentery of foetal cats and young kittens. He finds that they arise from the blood-vessels, and that it is not till they have made considerable progress that they have any relation with the nerves. It has already been discovered that in young animals they frequently contain capillaries. They first appear as prominences on the walls of the blood-vessels formed from the adventitia. They enlarge into knobs along the walls, and each contains a minute vessel which springs from the parent one. They are gradually detached, each hanging to the vessel by a pedicle containing the capillary. At about this stage, a nerve-fibre is found in their interior, which can soon be traced into a larger nerve, but it is to be noticed that the main nerve is not one in company with a blood-vessel but one that comes to it from a distance. In the course of time the nerve appears to draw the corpuscle away from the vessel, and the internal capillaries gradually disappear. Arndt is inclined to believe that these bodies are in some functional relation to the vaso-motor nerves; but, however plausible this theory may appear in regard to those in the mesentery, it is less so for the numerous ones found in the articular branches of the digital nerves.

SPLEEN.

Dr. Klein begins this very valuable paper² by alluding to the two opposite theories of the function of this organ, according to one of which red corpuscles are formed, and according to the other are destroyed, in the spleen. He inclines to the latter view, from the fact that pulp-cells are seen with red corpuscles in their interior, and because *débris* of hæmoglobin are frequently found.

He refers also to the disputed point whether the arteries and veins communicate by means of capillaries as elsewhere, or whether they open into a series of indefinite spaces. With the spleen of the dog, Klein's method consists in washing out the blood very thoroughly by injecting a one-half per cent. salt solution, next, injecting a one-tenth per cent. osmic-acid solution or simply Müller's fluid, and finally hard-

¹ Virchow's Archiv, band lxx., heft 1.

² Quarterly Journal of Microscopical Science, October, 1875.

ening the organ and staining with logwood. The human spleen is simply cut up and hardened in chromic acid. The matrix is found to consist of a series of honey-combed membranes partially inclosing irregular spaces through which the blood passes freely. The walls of these membranous partitions are in part formed of large, flattened cells resembling endothelium, and in other places they contain small, irregular nuclei. The most important discovery is that of many nucleated knobs projecting from the walls into the venous sinuses and showing signs of active growth. Klein believes these to be groups of white blood-corpuscles in process of formation; in time they break up into distinct individuals, which are carried off into the circulation. It will be remembered that some time ago he discovered an analogous origin of lymph-corpuscles from the endothelium of some serous membranes. But while the spleen is the cradle of the white corpuscles of the blood, it appears to be the grave of the red ones, which are devoured, if we may use the word, by the cells of the matrix. These two facts, for we think they may be accepted as such, and the demonstration of a system of sinuses instead of capillaries, are the chief results of this paper.

EXTRA-UTERINE PREGNANCY.¹

THIS work is the result of a careful analysis of five hundred cases of extra-uterine pregnancy, made with a view of aiding the profession in undertaking the diagnosis and treatment of this accident. Medical literature contains, doubtless, the records of a very large number of cases of extra-uterine pregnancy, but the account of individual cases can throw but little light on the true nature, the causes, or the proper treatment of this deviation from a normal pregnancy. It is only by a careful study of a large number of such records that a satisfactory conclusion can be reached which will aid the practitioner in making out the diagnosis or conducting intelligently the treatment of future cases.

In this work Dr. Parry has added a most valuable contribution to obstetric literature, and one which meets a want long felt by those of the profession who have ever been called upon to deal with this class of cases.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.²

SOME twelve years since, a foreign physician, who had recently emigrated to this country, and who claimed to possess a knowledge of ophthalmology,

¹ *Extra-Uterine Pregnancy: Its Causes, Species, Pathological Anatomy, Clinical History, Diagnosis, Prognosis, and Treatment.* By JOHN S. PARRY, M. D. Philadelphia: Henry C. Lea. 1876.

² *Transactions of the American Ophthalmological Society.* Eleventh Annual Meeting, Newport, July, 1875.

established himself in one of our leading cities, and started a monthly journal. Although devoted ostensibly to the interests of a department of science, it soon became evident that its real object was to advertise himself. This was the first appearance of an ophthalmic periodical in this country. England possessed at this time the Ophthalmic Hospital Reports, and Belgium the *Annales d'Oculistique*, while Germany took the lead of all, with Graefe's immortal *Archiv*, and later with Zehender's *Klinische Monatsblätter*. And so, rather than allow the American name to be disgraced by an adventurer's advertisement in the shape of a periodical claiming a scientific character, certain gentlemen of New York, Boston, and Philadelphia met one evening in January, 1864, in the former city, at the office of Dr. Henry D. Noyes, and discussed the policy of founding and conducting an American journal of ophthalmology. This had been the object of their coming together, but more intimate acquaintance with each other's views caused them to relinquish this project and to found instead a society that should hold an annual meeting. The first of these meetings took place in June of the same year, and Dr. Edward Delafield was elected president.

Time passed on; the offending publication lapsed into obscurity and finally expired, but the society grew and prospered, holding a meeting each year (except in 1872, when the London congress occurred), and gathering into its ranks the leading practitioners of ophthalmic surgery in the United States.

Commencing with a membership of twenty, it now numbers seventy-three. The successors of the venerable Delafield in the presidential chair have been Williams, of Boston, and Agnew, of New York. At an early meeting it was voted that no member of the society should attach to his name in any public announcement the title of oculist, or any similar title, or announce in print that he gives particular or exclusive attention to special practice. Expulsion has followed the infraction of this law, and an opposite course of conduct has more than once led to a denial of the privileges of membership.

The scientific contributions have been numerous and valuable. Prominent among them in importance the present writer would place the method of treating asthenopia not connected with hypermetropia, by Dr. Dyer, of Pittsburgh. "Morbid sensibility of the retina," as it had long been the practice to term it, was, up to eleven years ago, the opprobrium of our specialty. Young practitioners, fresh from their European studies, and beginning to acquire a local reputation, were dismayed at being confronted with patients of this class, who had long been the despair of their elder colleagues, and who presented a type of disease entirely new to them, and occurring with astonishing frequency, its symptoms being inability to support the continued use of the eyes on near objects, with normal refraction and accommodation, strong muscles, and often unimpaired health. To the study of this form of asthenopia Dr. Dyer devoted himself, and the result was his plan of treatment by gymnastic exercise of the eye, communicated to the society in 1865. The adoption of this method has resulted in so large a percentage of cures as to render the treatment of this form of asthenopia as great a pleasure as it was formerly a source of dread. To dwell at length on the work of the society is of course impossible at the present time, but we may allude, in passing, to the fact that one of its mem-

bers, Dr. Loring, of New York, originated the most practical ophthalmoscope now in use.

The present volume of Transactions is smaller than many of its predecessors. It most appropriately contains an excellent likeness of the late Dr. Edward Delafield. Reports of cases form the bulk of its contents; noteworthy among these are two instances of Basedow's disease, in each of which Dr. Williams, of Cincinnati, did Graefe's operation of closing the lids for half an inch at the outer commissure, to relieve the deforming exophthalmus. The first patient was in feeble health at the time. Destructive inflammation ensued, causing the loss of each eye, and some two weeks later death supervened. In the second case, the cornea became alarmingly affected, and vision was saved only by careful treatment. The pressure of the narrowed commissure, it is inferred, caused strangulation and inflammation. Dr. William Thomson, of Philadelphia, contributes a most interesting paper on the possible inducement of staphyloma posticum by astigmatism.

In print and paper this volume is much inferior to that of the past year. And the scattering of the business meetings through the book, instead of following the previous practice of bringing them together on the first few pages, will, if continued, lead to much inconvenience.

H. D.

BROWN'S AIDS TO ANATOMY.¹

THIS little book is a collection of descriptions of various regions of the body and of certain structures. In some ways it is ingenious, but the descriptions are not accurate, nor in all points correct. The author states that the object of the book is to place at the service of the student the "aids" that have been useful to him, and gives a warning against relying on it instead of on dissection. The book, however, is none the less what in college is called a "pony," and will be used, we fear, entirely for cramming.

T. D., JR.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

JAMES R. CHADWICK, M. D., SECRETARY.

JANUARY 29, 1876. The President, DR. H. W. WILLIAMS, in the chair.

Therapeutic Properties of Zinc Phosphide.—DR. PATTEE read a paper on this subject, in the course of which he recommended the use of the drug in neuralgia, spinal irritation, and other nervous diseases in which phosphorus is usually employed.

Difficult Labor; Cephalotripsy; Version; Death of the Mother.—DR. W. W. MORLAND reported the case. Mrs. —, an American, thirty years old, of short stature and nervous temperament, a subject of dyspepsia, expected to be confined, with her first child, about the middle of November, 1875.

¹ *Aids to Anatomy.* By GEORGE BROWN, M. R. C. S., etc. London: Baillière, Tindall, and Cox. 1876.

Labor, however, did not come on until two o'clock on the morning of Sunday, the 9th of January, 1876. The patient had suffered, through the whole of her pregnancy, from dyspepsia and kindred annoyances, to a very unusual degree; distressing flatulence, with pain, hiccough, frequent nausea, and occasional vomiting, having defied nearly all remedial measures. She grew very thin and weak, in spite of all attempts to nourish and support her; and owing to the very large size of the abdomen (due, as I supposed, to abundant liquor amnii) the falling away of other parts was all the more noticeable.

About three weeks before her confinement, the liquor amnii began to be discharged, very freely at times; not only when she was walking or standing, but when quietly sitting, and even when recumbent. It was stated to me that it often ran, in a stream, upon the floor. This untoward occurrence naturally caused apprehensions of a tedious and difficult labor, and I advised as much quietude as possible, but did not obtain much, as the patient went about, and even out-of-doors, until a few days before her confinement.

I was sent for at six o'clock on the morning of Sunday, January 9th, and saw the patient—who lived at Boston Highlands—at about 7.45. Labor-pains were then strong and frequent, and, as previously stated, had been first felt about two o'clock in the morning.

On examination, I found the head presenting, the occiput slightly turned toward the left sacro-iliac synchondrosis. This position was expected, as it had been very easy to distinguish the different parts of the child some days previously, through the abdominal and uterine walls, facilitated as the examination was by the great loss of liquor amnii. The beat of the fetal heart had also been distinctly heard, on several occasions, in the left iliac region.

The pains increased, and some progress of the head was noted, when the patient became clamorous for ether. This was administered, from time to time, until I found that it retarded and finally seemed absolutely to stop the pains, when of course it was suspended. The patient was extremely urgent for it, and would not be persuaded of the necessity for slackening or stopping its use.

At about four P. M., no advance of consequence having been made, and a degree of exhaustion being noticeable in the patient, I resolved to try the forceps, although the head was still rather high in the pelvis. Before proceeding to this measure, however, I sent a note to Dr. Cotting, requesting him to come and give his opinion as to its propriety and necessity. Dr. Cotting came promptly, and, after examination, advised entire withdrawal of the ether, some nutriment to the patient, who had taken almost nothing since the morning,—she had refused, indeed, even tea,—and further delay, until it could be seen how much unimpeded labor-pains might effect. This was accordingly done. After waiting from three and a half to four hours, and finding no change,—the pains having returned,—but only increasing exhaustion, I fully etherized the patient and tried the forceps. After considerable difficulty, on account of the high position of the head, they were satisfactorily applied, but no impression could be made; it seemed as though the child were glued to the uterus, and as if its body also met with some obstacle. At last the forceps slipped and came off. After three attempts, resulting in the same way, I sent again for Dr. Cotting, at about 9.45; he came, bringing his own forceps. His

experience was the same as mine. Turning was now suggested; but, on endeavoring to find a foot, it was discovered that an arm was in the way, which partially explained the difficulties. A loop of the cord had also descended, and was pulseless. Dr. Cotting succeeded in reaching a foot, and this was brought down, but extraction could not even then be effected. Alternate efforts were made by us, until our hands were nearly paralyzed. Then Dr. Cotting advised the use of the perforator, and opened the head. While reducing the head, careful tentative efforts were made with the crotchet; the hook being introduced into the foramen magnum, into the mouth, etc., by us both, but no advance of the child could be obtained. Room, nevertheless, having been secured, after considerable effort I was fortunate enough to reach and bring down the other foot, and, with strong traction, delivered the child. The shoulders were broad, and the pelvic spaces, although they were, as it proved, sufficient, could by no means be termed ample. Comparatively little blood was lost, not more certainly than in ordinary labors. The uterus contracted well and speedily expelled the placenta.

Dr. Edson, who, at Dr. Cotting's suggestion, had been sent for to assist us, arrived just as delivery was completed, and rendered invaluable aid in subsequent attention to the patient, now sinking from exhaustion and shock. Brandy and ammonia were given by the mouth, and brandy and beef-tea by the rectum, with heat to the feet, and other appropriate treatment, chiefly under Dr. Edson's supervision. A temporary rally took place, and consciousness returned, as the anæsthesia passed off; but the pulse became fluttering again, soon ceasing at the wrist, and death occurred without struggle in about one and a half hours after delivery.

The child weighed seven and a half pounds. Probably had craniotomy not been done, it would have weighed eight pounds.

DR. COTTING testified to the accuracy of the above report, and dwelt at some length upon the unforeseen difficulties encountered.

DR. LYMAN expressed himself satisfied that everything had been done properly in the conduct of the case.

DR. CHADWICK commented upon the difficulty of determining the obstacle to the descent of the head in all instances. He had once seen a statement that, after the escape of the waters, the uterine fibres would sometimes contract so tightly about the child as to form an annular stricture wherever the circular fibres were not opposed — at the neck, for instance — by the child's body; such a contraction would of course interfere with the expulsion of the child. In view of the early escape of the waters, he thought that possibly this explanation might apply to the case under discussion.

DR. WEEKS expressed a doubt whether such a stricture could interfere with delivery. He favored the induction of premature delivery soon after the waters began to escape in the latter part of pregnancy.

DR. A. B. HALL believed in waiting until the pains came on, even though delayed for two or three weeks.

DRS. LYMAN, HARLOW, and EASTMAN, all deprecated interference under such circumstances, citing cases in support of their opinions.

DR. J. P. REYNOLDS approved of these opinions, calling attention to the

so-called false waters that occasionally escape at some time during pregnancy, and yet do not cause or necessitate premature delivery. With reference to stricture, he recalled a case in which Dr. Channing had been obliged to dilate the os uteri to allow the shoulders of the child to pass.

A Larynx affected with Croup was presented by DR. C. P. PUTNAM. The patient was five years of age, and had been in good health until forty-eight hours before death. He had not been called in until twelve hours before death; the respiration was then 38, and noisy; there were no pulmonary signs, no struggle for breath, gasping, or lividity; the temperature was 103° – 103.5° ; the child was playing with toys up to the last hour. The treatment had been a moist atmosphere, emetics, and the application of ice to the throat.

DR. J. B. S. JACKSON had never seen a case of croup where the membrane was not found in the larynx as well as in the trachea.

DR. FITZ pointed out that in this specimen the membrane was thickest in the larynx.

DR. WEEKS had had a patient with croup two years ago, who was suddenly strangled by spasm of the glottis.

DR. MINOT asked whether the case reported would have differed from one of diphtheria, and the mode of death from the one common to that disease, if the membrane had been seen to extend to the larynx and soft palate.

DR. PUTNAM replied that the membrane here lay upon the mucous membrane, but was not intimately connected with it as in diphtheria.

DR. J. B. S. JACKSON said that in cases of croup he had always found the membrane apparently incorporated with the mucous membrane in the larynx, but in the trachea and bronchi it could be very readily detached, the membrane beneath often appearing to the eye perfectly healthy.

DR. H. I. BOWDITCH cited, in illustration of an important point in practice, a case in which he had summoned Dr. John C. Warren to perform tracheotomy; on reaching the house they were told that the child had just died; the trachea was nevertheless at once opened and the child revived, though he ultimately succumbed to the disease.

DR. BRADFORD related a case of Dr. Monti, in Vienna, where, after apparent death, a catheter was introduced into the trachea, artificial respiration established, and the patient saved.

DR. REYNOLDS mentioned an instance where four individuals had diphtheria after attending the funeral of a person who had died of that disease, and asked whether, on such occasions, it was a physician's duty to give warning of the danger.

DR. FITZ said that we had impressions only about this subject, and moved that a committee be appointed to investigate it. This motion having been adopted, the chair appointed Drs. Bowditch, Fitz, Bradford, C. P. Putnam, and F. C. Shattuck.

A communication from the Boston Society of Civil Engineers was read, inviting the Suffolk District Medical Society to take measures for the purpose of promoting the adoption of the metric system of weights and measures in this country. On motion of the secretary, a committee was appointed to report at the next meeting.

AMERICAN MEDICAL JOURNALS.

WE have noticed with much interest, of late, signs of a realizing sense among our contemporaries of the present standing of American periodical medical literature. Dr. Gross has given a brief sketch of our medical journals in a recent address delivered at the Jefferson Medical College. He estimates that the present number of these periodicals cannot be much short of one hundred. Excluding, however, a great number of publications which, strictly speaking, would not be classified as medical journals, we may safely say that the number is not far from sixty. When we remember that the history of this department of our literature does not extend further back than the beginning of the present century, and the additions to the list which are yearly recorded, the question may well be asked, Is this rapid development a gain in any way to medical science and literature, or are there other motives than the advancement of these objects at the root of this remarkable activity? and what prospect does the present plan upon which most of our journals are conducted offer for the future? A glance at our past history is certainly not very reassuring, if, as we fear, history promises to repeat itself. *The Richmond and Louisville Medical Journal* is our authority for the statement that "at least twenty medical journals originated and published in the South and West since the war have, after a life of painful disaster, finally succumbed." Of those at present in existence there are but two which can look back half a century, and there are certainly very few which can count a score of volumes. A large part of them, as Dr. Gross truly says, lie uncut and unread upon the library shelves. No one will, we presume, doubt that there is ability enough in the country to create a literature of the highest class. What are, then, the causes of these exuberant but unfruitful productions?

A glance at the list of our present periodical publications will show a peculiarity which is in marked contrast to those of other countries. Each separate medical community, however diminutive in proportions, is usually provided with a journal of its own. Most medical schools, particularly those whose qualifications for their work are of an uncertain character, consider an "organ" a necessity. The result is a series of journals of purely local character, whose very names, in the majority of cases, are unknown beyond the moderate limits of their circulation. Our basis of classification may be considered rather geographical than scientific or literary. Indeed, the latter qualifications appear to be quite secondary to local interests. No sooner is the "organ" fairly established than rival interests feel the need of protection, and an opposition journal springs into existence. The small stock of material which a busy community can muster can be divided between the two, and the gaps are filled with a large amount of borrowed plumage, while editorial space is devoted to a petty warfare from which the cause of medicine receives but little benefit.

In our large cities the publishers' interests are of paramount importance. Quantity and not quality is the desideratum. In New York, a city abundantly able to support two or three journals equal if not superior to those of any other country, medical periodicals spring up like weeds in a garden. It is possi-

ble that the productions of the enterprising publishing firm may be more effectually disseminated in this way, but one cannot help feeling how much more creditable to the profession it would be to concentrate these diluted energies and divide the large sums of money annually subscribed for periodical literature among a few journals, which, properly distributed, might represent in just proportion the different sections of the country, and at the same time maintain a standard of which we should all be proud. The work of conducting them would be taken from the hands of amateurs and placed under the care of men whose experience or abilities particularly qualified them for a sphere in which they would become experts. Every physician would be sure of getting something for his money, the various interests would without doubt profit by the change, and last, but not least, the present rivalry of factions would be replaced by a more generous and profitable one, which could not fail to impart a higher tone to our medical literature.

THE VITAL STATISTICS OF PROVIDENCE.

THE twentieth annual Report of the Vital Statistics of the city of Providence has just appeared. We find in it many interesting facts and deductions with reference to the registration of births, marriages, and deaths in that city in 1874; it adds another to the long list of carefully compiled reports from the hands of the widely-known registrar, Dr. Snow, whose work in this department of state medicine is recognized as a model to be emulated.

The proportion of births to population in Providence in 1874 was one to 34.69 persons. Most of the births occurred in the latter half of the year, the last quarter having a marked excess. There were 102.63 males to every 100 females. The percentages of foreign, of native, and of mixed parentage are very nearly the same as have been found in Massachusetts, the foreign births being in excess in both cases. There were twenty-eight mothers who had eleven children each, thirteen who bore twelve, one who bore thirteen, and one who bore fourteen. In the last twenty years there have been ten women each of whom had fifteen children, three who gave birth to sixteen, five who bore seventeen, and four who bore nineteen. The nativity of these prolific matrons is not given. In the twenty years there has been an average of 3.42 children born in the life-time of each mother. In 1874, the woman who bore the family of thirteen children had her thirteenth child at the age of thirty-one; and the one who had fourteen was thirty-four years old at the time of her last labor. One girl had her first child when fourteen years old, and three girls of fifteen became mothers for the first time. One girl of eighteen was the mother of three children. The ratio of marriages to population was less than usual in 1874. Fifty-five per cent. of the marriages were of American grooms and brides. Four marriages were solemnized according to Mormon rites.

The death-rate in 1874 was 20.6 in every thousand of the living population or one death to every 48.54 persons. The average age at death of American decedents was 31.17 years, of those of foreign parentage 22.51; the excess of infant mortality in the foreign population will account in part for this disparity. Of those of American parentage who died, 19.10 per cent. were under

one year old, and 34.02 were under five years old; the percentages for those of foreign parentage were 21.14 and 43.55, respectively. The total infant mortality, regardless of nationality, was 20.23 per cent. of the whole number of deaths, and the deaths of children under five years old comprised 39.31 per cent. of the entire mortality — a significant expression of the loss, much of it preventable loss, of young lives. Among the causes of death, consumption and scarlatina are conspicuous, cholera infantum and pneumonia standing next. It is encouraging to note the apparent gradual diminution in the mortality from consumption during the last thirty-five years. Scarlatina was unusually prevalent and fatal in 1874. There were no deaths from small-pox.

The study of vital statistics does not offer great attractions, except to those whose tastes incline thereto; we can assure all our readers, however, whether they are specially interested in statistical investigations or not, that they will find in these reports on the births, marriages, and deaths of Providence a remarkably clear and useful presentation of facts touching human life in the matter of its reproduction and decay.

MEDICAL NOTES.

—“A correspondent,” says *The Lancet*, “after a recent visit to the Villa Casalini writes thus of its illustrious inmate: ‘General Garibaldi has rather retrograded from the improved health to which the sulphur baths of Civita Vecchia brought him. The arthritic pains have returned with such intensity that for some days he has been confined to bed. His medical advisers ascribe the relapse to the anxiety he has undergone during the consideration and rejection of his Tiber scheme by the government commission, and to the increased labor he has imposed upon himself in vindicating its merits. In laboring for the health of the community, it is but too characteristic of him to sacrifice his own.’”

—The use of liquor bismuthi for hæmorrhoids and prolapsus ani is recommended in *The Practitioner* for January, 1876, by John Cleland, M. D., F. R. S. It is recommended that the patient with hæmorrhoids mix a dessertspoonful of liquor bismuthi with half a wineglassful of starch, and, after getting into bed and returning the bowel into its place, introduce this enema and retain it. Dr. Cleland states that in instances in which the necessity for surgical interference seemed indubitable an operation has been avoided, and his patient has recovered under the use of the injections.

—The Paris correspondent of *The Medical Times and Gazette* of February 12, 1876, reports the removal, by M. Tillaux, of a cherry-stone which had been in the nostril of a woman for twenty years. Before presenting herself at the Lariboisière Hospital the patient had gone the rounds of the hospitals and a host of private practitioners, without any one having detected the presence of the body in the nostril. The consequence was that she was treated for ozæna, which, of course, was the prominent symptom. But all were mistaken as to its real cause. Some looked upon it as a serofulous rhinorrhœa, while others put it down to the syphilitic taint, and the patient was submitted to

the treatment generally adopted in one or other of these affections. M. Tillaux had fallen into the same error, and although there was no other sign of syphilis or scrofula, he gave the patient the benefit of the doubt, being convinced that if she was not scrofulous she must be syphilitic, and she was accordingly subjected to the specific treatment for syphilis. The patient had been nearly six months in hospital, undergoing this treatment without any improvement in her condition. From time to time M. Tillaux examined the nostril with a probe and felt the foreign body, which he mistook for dead bone. Eventually, the foreign body became movable, and its extraction with a pair of dressing forceps was accomplished. The instrument brought away a body about the size of a large pea, as black as coal, of an irregular shape, and of a most offensive odor. On cutting it open, it was found to be a common cherry-stone. The patient denied that she could account for its presence in the nostril. She left the hospital a week after the operation with her nose as well as if nothing had happened to it.

— Dr. John Vite reports to *The Richmond and Louisville Medical Journal* of February, 1876, the case of a man "who lived four days with a knife-wound penetrating into the pericardial sac, and passing through the left ventricle of the heart into the opposite wall." The patient, a colored man aged twenty-five years, was admitted into the St. Louis City Hospital, September 29, 1870, at two o'clock P. M., with a knife-wound in the left breast, about one and one half inches below the left nipple, and three fourths of an inch towards the median line, entering between the fourth and fifth ribs, at the junction of the ribs and costo-sternal cartilage, the opening being about one half an inch in length and nearly perpendicular. There was no perceptible hæmorrhage at the time of the patient's admission, although he had previously bled quite freely. His pulse was scarcely perceptible, his respiration was hurried, and he presented a comatose condition, being unable to articulate. An hour later, his condition had improved, and the next morning, at the time of the hospital visit, he was dressed and sitting at the side of the bed, feeling, as he stated, quite well. There was no external hæmorrhage, the pulse was full and regular at 120, and there was no complaint of pain. He wished to walk about the ward, but was ordered to bed.

There was no marked change till October 3d, the fourth day from admission, when the patient was found, at eight A. M., breathing hurriedly and with great difficulty. He died at noon, almost exactly four days from the time of the accident.

The post-mortem examination showed the pericardium filled with blood, and a coagulated clot of blood at the apex of the heart. The left thoracic cavity was also filled with blood, amounting to about six quarts; the left lung was collapsed, but was uninjured by the knife. The heart was pierced to the left of the septum about one inch from the apex, the wound extending through the left ventricle into the opposite wall, and almost passing through that also. An "exudation membrane" was found to completely envelop the heart, which, with the clot above mentioned, seemed to close the wound and thereby prevent further hæmorrhage. The muscular substance of the heart was much softened, showing clearly, the reporter thinks, that death was caused from carditis, ac-

accompanied with pericarditis. Dr. Vite asks if there would not have been a possibility of saving his patient's life, if his condition could have been known, by performing paracentesis thoracis immediately upon his arrival at the hospital.

— Dr. M. F. Coomes, in the *Louisville Medical News* of January 15, 1876, recommends the bromide of potassium, in powder or saturated solution, in the treatment of nasal catarrh where there is a dry condition of the membrane. In hypertrophy of the membrane lining the nasal cavities, with an insufficient amount of the normal secretions, a condition met with in proliferous inflammations of the membrane, insufflations of the powdered bromide or injections of the saturated solution produce excellent results. By its use the secretions of the membrane are increased, congestion lessened, and a marked reduction in the hypertrophied tissues. Its immediate effects in these cases of proliferous inflammation of the nasal cavities is to relieve the patient of that sense of "stuffiness" which is almost always complained of. The bromide is also of value as a local agent in the treatment of throat affections. In cases of acute tonsillitis and pharyngitis, it matters not whether in their incipency or in the advanced stages, a solution of the bromide of potassium, sixty grains to the ounce of water, applied with a mop or with an atomizer every hour or two, will be found to produce well-nigh complete relief. In cases of ulceration the open sore should be touched with carbolic acid or nitrate of silver. In but few cases will it be necessary to apply the escharotic a second time. Under this plan of treatment all the painful and distressing symptoms that attend such cases speedily disappear.


COTTAGE HOSPITALS.

MESSRS. EDITORS, — The approving notice of our unpretending hospital, that appeared in the last issue of the *JOURNAL*, leads me to think it would not be without interest, in this Centennial year, to know how many hospitals, large and small, there are in that portion of this country which lies east of the Mississippi and north of the Potomac and Ohio. The population of this territory is about the same as that of England, namely, in the vicinity of twenty-two millions.

Now, in 1873 there were three hundred and seventy hospitals and infirmaries proper in England, and of these, one hundred and nine did not contain over twelve beds each. Of this number, forty-one were either general or special hospitals — the latter embracing orthopaedic, skin, lying-in, etc. Separate mention should be made of the ophthalmic hospitals, of which there were thirteen. One of these contained but two beds! Some of these charities were founded many years back, and, as a general rule, in the larger towns.

A decade or so previously, or during our civil war, owing to the "activity of the medical profession," or to the efforts of the ladies and the clergy, the erection of "cottage hospitals" was begun, so that at the date given above there were fifty-five in use (a few being called "rural" and "village") in as many boroughs and villages. The number of beds in the different hospitals varied

from three to twelve or more, but the average was six. In a hospital having six beds, forty-six in-patients were treated in the preceding year from a hamlet of thirteen hundred and twenty-two inhabitants. In another hospital of the same size, in a village of thirty-six hundred inhabitants, but twenty patients were received. In a village of fifty-five hundred inhabitants, sixty-eight patients were treated in a hospital of seven beds in one year. It appears that some of these institutions are founded and cherished by persons of station and wealth.

Several years ago, the Rev. Bryant Burgess, Honorable Secretary of the Cottage Hospital at Chesham, Bucks, then just completed, very kindly sent to me an accurately drawn scale-plan of the hospital. The plan resembles a . Two wards, each arranged for three beds and separated by the matron's room, are in the horizontal part. At the top of the vertical part is a hall, and, lower down, the nurse's and operating rooms, the kitchen, bath-room, etc. The water-closets are well isolated, and the beds are situated between windows, with a view to the treatment of fever cases. There are numerous bow-windows, verandas, and other architectural helps, that must make the little hospital attractive.

Though the plan is more elaborate than could well be carried out here in a community of six thousand persons, permit me to quote from a letter received from the honorable secretary: "With certain extras it cost £874. It is entirely on one floor; there is no staircase. All the beds and furniture were given by persons in Chesham. I am happy to say that it is working most satisfactorily, and is greatly valued by the poor."

So much for England. It may be assumed, perhaps, that Massachusetts is as well provided with hospitals in proportion to our population as is any one of our States. How well provided are we? There are over forty cities and towns within the commonwealth in each of which the population exceeds six thousand. So far as I know, but six of these sustain a hospital! What is true as regards the deficiency of hospitals in this State is doubtless true of other States.

The remedy rests with the medical men. If they will help celebrate this year by soliciting funds from their wealthy patients in aid of "cottage" or other hospitals (as was done in Salem with such signal success), by the 31st of December many new hospitals will be in operation all over the country. When the laity learn that a hospital is to be established, they are pretty sure to become interested in it and to make pecuniary and other contributions. To start a hospital in a modest way requires no great expenditure of effort or money. Without waiting for a fund, a small house can be rented and a few beds made up, a matron and a maid secured (relying on the "chore-man" for necessary help in the wards), and the hospital is ready! Managed in this way, the annual expense of running it will not vary much from that of a well-conducted family — say from \$1500 to \$2500. This is met in a measure by the money received from paying patients, by that allowed by the State for patients of foreign birth who have no "residence" and who may be too ill to be taken to a State alms-house, and by the amounts paid by towns for patients having a claim upon them.

In conclusion, I do not purpose speaking of the advantages of having a hospital in every sizable town, as they must be apparent to all of your readers.

The subject is one of interest, and if it is sufficiently agitated by physicians, it ought to lead to the same results in this country that we are permitted to see in England.

Very respectfully,

DAVID COGGIN.

SALEM, February 28, 1876.

ELECTROLYSIS AGAIN.

MESSRS. EDITORS, — In your issue of February 24, 1876, page 212, line 24, occurs this passage: “Unfortunately, Dr. Cutter has not mentioned the number of his fatal cases, nor the symptoms in such cases which might assist in forming a judgment as to the causes of failure and be a guide against future accidents.”

Allow me to say unequivocally, I have never had nor seen any fatal case of electrolysis of uterine fibroids. Of course I could not mention any fatal case of my own knowledge.

Dr. G. Kimball has had one case, that of a feeble, sickly person, who the next day after the operation exposed herself by walking out in a hall. This exposure was followed by chills and typhoid symptoms. Death ensued in three weeks. It may be a question whether the operation or her own imprudence killed the patient.

I wish to say here, also, that if Dr. Webber or any one else has got or can get up any battery for this purpose better than mine, I shall be thankful. God sometimes gives new ideas to men of humble station in the profession.

Respectfully,

E. CUTTER.

CAMBRIDGE, February 25, 1876.

“*HÆRET LATERI LETHALIS ARUNDO.*”

MESSRS. EDITORS, — An accident occurred to one of my patients recently which is probably unique, and therefore I send you a brief report of it for insertion in the JOURNAL. It is a case of impalement upon an “ice-pick.”

J. T., a boy seven years of age, was playing with the implement mentioned (a truly innocent and appropriate plaything for small children), when he fell upon it in such a way that it penetrated his body about an inch above and to the right of the penis, passed downward obliquely to the left, entirely through the scrotum, emerging a little above the left testicle somewhat posteriorly to a vertical line drawn through it, then penetrated the left thigh about half an inch behind the femoral artery, and was arrested by the femur! The little patient pulled this savage weapon out with his own hands, and started to walk home, bleeding profusely meanwhile; he soon fainted, however, and was picked up and carried in by a policeman.

On my arrival the hemorrhage (which, judging from the appearance of his clothing and from other evidence, must have exceeded eight ounces) had nearly ceased. The boy had fainted a second time, was blanched and exceedingly prostrated. I administered stimulants, applied adhesive plaster to the wounds,

gave an anodyne to relieve pain, enjoined perfect rest, and left the patient. A line drawn from the wound of entrance to that of exit from the scrotum would pass directly through the urethra, and fearing that it was lacerated I anticipated trouble from that source. Much to my surprise, on visiting the patient some hours later I found that he had passed, with little pain or difficulty, about six ounces of clear, normal urine, and that there was scarcely any swelling, except of the thigh. The urethra was evidently intact, the tunica vaginalis had escaped injury, and there was almost no extravasation of fluid into the tissues. The femoral artery had barely escaped puncture. The boy made a rapid and perfect recovery.

The "pick" was fifteen inches in length and about one third of an inch in diameter, not very sharp, but very rusty and rough.

I think it unlikely that such a wound could be repeated, with such an instrument, at a single thrust, intentionally or otherwise, among those delicate structures, without more serious results.

J. O. MARBLE.

WORCESTER, *January 27, 1876.*

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING FEB. 26, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	599	29
Philadelphia	800,000	358	23
Brooklyn	500,000	242	25
Boston	342,000	153	23
Providence	100,700	29	15
Worcester	50,000	13	14
Lowell	50,000	13	14
Cambridge	48,000	22	24
Fall River	45,000	13	15
Lawrence	35,000	5	7
Lynn	33,000	15	24
Springfield	31,000	8	13
Salem	26,000	3	6

Normal Death-Rate, 17 per 1000.

BOOKS AND PAMPHLETS RECEIVED. — On Alcohol. By Benjamin W. Richardson, M. A., M. D., F. R. S. New York: The National Temperance Society and Publication House. 1876.

Extract from the Ninth Annual Report of the State Board of Charities of the State of New York, relating to the Sanitary Condition of Towns. Albany. 1876.

Remarks on Intra-Uterine Polypi. By A. Reeves Jackson, M. D. Reprinted from the Chicago Medical Journal and Examiner. Chicago. 1876.

A Series of American Clinical Lectures. The Principle of Physiological Antagonism as applied to the Treatment of the Febrile State. By Roberts Bartholow, M. A., M. D. New York: G. P. Putnam's Sons. 1876.

At a recent meeting of the Trustees of the Massachusetts General Hospital, Dr. Algernon Coolidge, having resigned the position of visiting surgeon, was appointed consulting surgeon; Dr. J. Collins Warren was appointed visiting surgeon, and Dr. John Homans surgeon to out-patients.

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ON SO-CALLED "ULCERATIONS" OF THE OS UTERI.¹

BY CLIFTON E. WING, M. D.

It has fallen to my lot, as assistant at the New York Hospital for Women, and as a specialist, to have under observation a large number of patients who have been treated at one time or another for so-called "ulcerations of the womb." The histories of these cases, coupled with the fact that the chapters upon the subject in the various text-books of the diseases of women are unsatisfactory, tending to mislead rather than to assist the student to an appreciation of the true condition, have led me to think that a few words concerning the affection might not come amiss. The time at my disposal will not allow of any attempt to give the history of the subject, nor shall I quote extensively from what has been written. I shall try simply to present some practical truths, prefacing my remarks with a statement that I claim nothing whatever as original. The facts were all explained and demonstrated to me by the gentlemen under whom I have served, and repeated observations have confirmed their correctness.

What is commonly considered and treated as ulceration of the womb is not ulceration at all, but one of two conditions, both of which, once clearly understood, are simple enough. In the first condition, frequently found in its typical form in women who have not borne children, and where the cervix and os retain the normal shape, there is seen a red abrasion often entirely encircling the os; it is occasioned by the irritating discharge poured out by a uterus affected with catarrh, or, as is commonly said, endometritis. We all know how often comes a so-called cold in the head, with its accompanying discharge from the nose; the uterine mucous membrane is liable to a similar catarrhal discharge. The woman affected with a discharge from the nose removes it by the use of the handkerchief, and so prevents it from excoriating the upper lip and the edge of the nostril; if the discharge is still sufficiently irritating or excessive to cause some excoriation, perhaps the use of the handkerchief is supplemented by an application of cold cream or other unguent to the

¹ Read at the meeting of the Norfolk District Medical Society, January 11, 1876.

part. Now let the same woman, from, it may be, the same cause, have a uterine catarrh. She cannot keep the irritating discharge constantly removed from the surface of the cervix uteri, nor can she practically apply any unguent; and the end of the cervix in that woman is soon in the same condition as the upper lip and nostril of the little ragged boy who runs about the street on a wintry day, having no handkerchief to use and no cold cream to apply: namely, the epithelium is removed, and a raw, excoriated surface comes to view.

Catarrh of the uterus has generally become chronic before the patient applies to the physician, and the papillæ at the abraded spot, as a result of long-continued irritation, frequently have become much hypertrophied, and deceive the inexperienced eye into diagnosing granulations. Too often, additional irritation is caused by the physician, who, totally misunderstanding the case, hastens to cure the "ulcer" by lunar caustic or his other "favorite application." What educated physician would think of attacking the excoriated nostril and upper lip referred to by "burning out the 'ulcer,'" giving no attention to the catarrh, its cause? Why should we do the same thing in exactly the same condition in another part of the body? If the discharge be stopped by proper applications to the inner surface of the uterine cavity, the so-called "ulceration" will take care of itself; for you may depend upon it that if you are not more skillful than most physicians in making your application, enough will be spilled upon the excoriation outside to stimulate that part sufficiently.

The other condition mistaken for ulceration is "rupture of the cervix with eversion." It is important that this be understood correctly, as many able physicians, and specialists even, have failed entirely to recognize the real trouble or its proper treatment, and it explains those cases which have been described as "severe ulcerations which require active treatment," wherein the strongest acids and caustics, the actual cautery, and even amputation of the cervix have been tried in misdirected attempts to bring about a return to a normal state. Dr. Emmet was the first to recognize and describe the true condition in this disease, and to invent and practice the operation for its radical cure. To him we are indebted for one of the most important steps which modern gynecology has taken in its march of improvement.

Rupture of the cervix uteri occurring in labor is generally thought to be rare, and to an extent sufficient to attract the attention of the accoucheur by symptoms is so, but it occurs in a less degree in a large proportion of childbirths. As pointed out by Dr. Emmet, if the rupture be anterior or posterior to the os, the side walls of the vagina tend to hold the torn surfaces together, so that union usually occurs; but if it takes place laterally from the os, the rupture tends to gape, the posterior lip being held back by resting against the posterior wall of the

vagina, while the anterior lip shoves forward in the axis of the vagina. This can be made clearer by a diagram. (See Fig. 1.) The dotted lines show the result of a rupture which has taken place on both sides of the os, as is quite common, as high as A. The tissue between A and B, which formed the normal conical cervix, is divided by the rupture into two parts, which separate as described, the posterior lip rolling backward and the anterior lip forward. The conical shape of the cervix is entirely gone, and the bright red membrane, from A to B, which was the lining of the cervical canal, is rolled out and brought to view. The condition is analogous to that of ectropium where by the rolling outward of the lid the bright-red conjunctiva is seen.

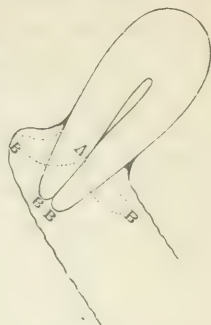


Fig. 1.

Now let any physician who does not understand the condition examine with a speculum, and what does he see? Instead of the small, conical cervix which he has expected would fall readily into the end of his speculum, he finds a condition of things which startles him. With his largest speculum he cannot command a view of the whole cervix. (See Fig. 2.) The anterior and posterior lips, as he sees them spread out, while he thinks he is looking at their ends only, seem to him wonderfully hypertrophied. This appearance of hypertrophy, which is so nicely produced by eversion, may be demonstrated by any one by simply standing before a mirror and observing the lips in their usual position when the mouth is closed; then noticing the appearance produced by forcibly everting them, the upper lip being rolled up toward the nose and the lower lip being pulled down toward the chin; the apparent hypertrophy vanishes astonishingly when the lips are allowed to regain their normal position. The cervix soon becomes so flattened out that traces of a rupture are not visible to an untrained eye, and the observer sees what he has no doubt is the external os, but what in reality is the opening of the canal at the level of the upper limit of the rupture (A, Fig. 2). All about this opening he sees a large extent of red, raw-looking surface, nothing more nor less than the mucous membrane of the canal rolled outward as above explained, its bright color contrasting with that of the vagina and external surface of the cervix almost as markedly as does the color of the mucous membrane of the mouth with that of the skin; but as the external os is thought to



Fig. 2.

be before the eye, the diagnosis of a hypertrophied cervix with ulcerations seems to be clear. Let any one evert the lips before a mirror as noted above, and see how readily the healthy red mucous membrane, with its little irregularities of surface, might appear, to one *expecting* to see inflammation and ulceration, to be in such condition, and it is easy to understand how the physician who all his life has heard of ulcerations of the uterus is liable to be misled.

Moreover, this eversion of the mucous membrane is often enough to give rise to a catarrhal discharge from the canal, if this is not present already. Such a discharge will produce excoriation here more readily than when the cervix is in its normal shape. In the everted mucous membrane the glandulæ nabothi frequently become enlarged, and degenerate into cysts, some on the surface, others deeper; this is another condition which is mistaken for granulations.

In a recent case, as marked as that represented in Figure 2, where the rupture has taken place on both sides of the os and extended well up, the diagnosis would be comparatively easy. Let it not be supposed that it is always so. The rupture may take place on one side only, and be small in extent, yet cause much rolling out. In old cases all traces of it are effaced by the flattening out of the cervix on the posterior wall of the vagina, and when seen, perhaps the mucous membrane, by the formation and bursting of the little cysts, or it may be by the applications it has received, has become hard and fibrous. The amount of eversion depends much upon the extent of the rupture at the external os. A rupture which is limited here but extends upward along the uterine canal will not cause much eversion, but will give an open, patulous canal, a condition often met with, and puzzling to one who does not understand its cause.

I said at the beginning of the paper that the text-books tend to mislead the student. It may be well to call attention here to one of the latest of these, Thomas on the Diseases of Women, and note to what extent the author affords illustration of the prevalence of the error of diagnosis referred to.

On page 289, in the discussion of hypertrophy, or, as he calls it, "hyperplasia," the author says, "It is astonishing to what an extent enlargement of the cervix as a result of areolar hyperplasia will go. Sometimes this part will equal in size a very small orange, and, filling the vagina, will compress the rectum to such an extent as to interfere with its functions." And again, on page 299, he states, "As I have before remarked, interference with that retrograde metamorphosis of the puerperal uterus which is now styled involution is in the great majority of cases its cause. Surprise may for this reason be excited by the assertion that of all forms of the affection the cervical variety is the most frequent." If this were true, it would be a curious fact that the body of the uterus,

where so much involution is necessary for its return to its former size, should be so much less liable to the trouble than the cervix, where so little is necessary. He has confounded, in his description, the apparent hypertrophy of an everted cervix with the true enlargement of hyperplasia. It is interesting to read further and see the attempt at a plausible explanation of these conditions.

On page 291 the author remarks, "The reason for this is to be found in the facts that cervical endometritis, which in multiparous women proves a not infrequent source of the disorder, is more common than the kindred affection of the body; that the cervix is peculiarly exposed to mechanical injury from coition, friction against the vaginal walls, and laceration occurring during parturient distention; that after childbearing the connective tissue at this point is looser and more permeable than that of the body, and that when involution is retarded for some months and then is accomplished, it sometimes takes place in the body but fails to do so in the neck from that exposure to injurious influences which has just been alluded to. The body of the uterus is so completely removed from contact with mechanical agencies outside of the abdomen that this part of the organ, as already stated, is not so frequently affected by hyperplasia as the corresponding tissue of the cervix." He here speaks of laceration of the cervix; and again, on page 298, he writes, "Laceration of the cervix and exposure of the delicate walls of the cervical canal to friction against the vagina is so frequently not only a concomitant circumstance, but also, I think, a cause of this condition, by interfering with involution, that it should always be looked for." After discussing the diagnosis and the operation, he concludes as follows: "Such an operation will often have a most happy effect upon the uterine disorder; nervous irritability will disappear, and nutrition become greatly improved, by the removal of this focus of irritation." In all this the author fails to see that, if his operation has been performed properly, his bugbear, hyperplasia of the cervix, has gone.

The diagram of what our author terms cystic or follicular degeneration of the cervix¹ is an excellent representation of what is seen on examining through a speculum a case of rupture and eversion. What is drawn as the external os is really a part of the canal; traces of the rupture are seen in the slit like shape of the os. The gland cysts are situated upon the everted mucous membrane, and not upon the external surface of the cervix, as the author describes them. His whole text upon the subject is wrong. If he will take tenacula and simply draw the lips together, he will restore the os uteri to its proper position, and will carry the follicles back to their proper place in the canal, and will never find it necessary to amputate the cervix by either the scissors or the galvano-caustic wire, as he recommends should be

¹ Figure 85, page 317, last edition.

done in troublesome cases. It is the misunderstanding of this common condition of rupture and eversion, I take it, which has led Dr. Thomas to draw that sharp separating line between inflammation affecting the tissues of the cervix and that affecting the similar tissues of the body of the uterus, a distinction which, as every histologist and every accurate clinical observer knows, is imaginary.

The only safe rule to follow is this: In case of a large cervix always examine to see if eversion be not present. In hypertrophy the cervix enlarges gradually towards the body; but, as is pointed out by Dr. Emmet, with eversion there is more or less of a neck above the everted parts, an approach to the shape of an inverted mushroom. The *practiced* finger can detect this. Try with tenacula, one on each lip, and see if they cannot be rolled inward; if there be eversion, and this be done skillfully, it will surprise any one seeing the operation for the first time to note how the great mass resolves itself into the typical conical cervix, and how on restoration of the mucous membrane to its normal place the "ulceration" disappears. Sims's speculum is here essential; the old round specula do not give room for the manipulation, and the valve specula, by distending the vagina with their branches, tend to hold the uterine lips apart.

Let it be understood that I do not deny that there is a connection between rupture of the cervix and enlargement of the womb; that rupture has a close connection with subinvolution does not admit of a doubt. The question, however, cannot be discussed here.

Emmet's operation for the restoration of the cervix consists simply in refreshing the surfaces and bringing the parts together again, retaining them there by sutures until union has taken place. Of course, care is taken to leave the uterine canal intact. The operation is best done under ether, and the patient should lie quietly in bed for several days after the sutures are removed.

For a bad case of rupture accompanied by all the symptoms which are sometimes caused by it, this is the only course to follow with prospects of much success; but in private practice many patients will not submit to operations, and it must be remembered that there are all degrees of rupture, some devoid of symptoms even. If the practitioner recognizes that the "ulceration" is the condition described, and that more or less of redness and angry look is as natural to the everted mucous membrane here as it is to the conjunctiva in ectropium, we shall see fewer bad results from the use of caustics. Now and then cases occur in which the cervix is pretty much gone, as a result of the diligence of somebody in "making applications."

I think there has been more unintentional malpractice by physicians of the better class in such cases than in any other affection of the body. A short time ago I saw a patient who had been treated by a physician

of good standing. He at first made applications of lunar caustic once a week; the "ulceration" proving rebellious, he came oftener and oftener, until the woman had a daily application for some weeks. The whole cervix was raw, bleeding on the slightest touch, while the physician was "fearful it was going to prove cancer." Dr. Emmet reports a similar case, and they are not very uncommon, for cancer is quite often suspected with this condition of eversion. With regard to applications, Dr. Emmet remarks, "The nitrate of silver in the solid form is in more common use, from its supposed mild action, than any other agent, yet from indiscriminate and too frequent use it has done more harm than any of the stronger caustics. It is not that I would so much deprecate its use in the hands of an expert, but, from its convenient form, it is too great a temptation for many who are the most ignorant to flatter themselves that they have mastered the art as a specialty when once in possession of a porte-caustique and speculum. This practice has become a scandal to the profession."¹ The stronger caustics in ignorant hands are of course worse. I have seen two cases within a year wherein there were cicatricial bands binding the cervix firmly to the vaginal wall and causing displacement, for which little could be done, and in both instances the only probable cause was the application of some caustic which had run down upon the vagina.

I would utter a caution against accepting as conclusive the statements, supported often by a report of cases, which now and then appear in the journals, that the most powerful caustics can be applied to the uterine canal up to the very fundus with wonderfully successful results and without danger. It should be remembered that the cases where this has been tried with disastrous effects never get into print. Many times when the operator thinks he has gone to the fundus he has not passed the inner os, as I have verified by observation.

As regards the choice of remedies I cannot do better than quote Dr. Emmet again: "In our selection we must use those calculated to do the least harm to the portion of the mucous membrane which may still be in a normal condition. Rare indeed is the necessity of applying, within the uterine canal, caustics, the cautery, or the strong mineral acids. It is true that these remedies act promptly, so far as to heal an erosion and to check all uterine discharge. But we cannot restore the patient to health by so far changing the character of the mucous membrane as to leave it a mere cicatricial surface. Our ultimate success will be directly in proportion to the condition in which we leave this membrane, for we will need its healthy action in the after-treatment of the case. That individual cases escape with but little damage is only due to protection afforded by the secretions; yet the practice, as a rule, is disastrous enough to deprecate their use."²

¹ Emmet, *Philosophy of Uterine Disease*, New York Medical Journal, July, 1874.

² Emmet, *Surgery of the Cervix*. New York. 1869.

Let me here point out a common error. A physician has a patient who has symptoms which he does not exactly understand, and he finally concludes to make a speculum examination; finding the cervix in the condition which we have been considering, and which he has always looked upon as ulceration, he fails to look further, thinking that he sees enough to account for all the suffering, when that which he has found may of itself be of no importance whatever. In this way I have known the worst affections of the uterus, the rectum, and the bladder overlooked. We all know of cases in which symptoms arising from disease of the most distant parts of the body have been foolishly referred to the same cause.

While decrying the ignorance which has so often led to such practice, let us not slight uterine affections. Many a uterine disease which would yield readily to treatment is neglected or not suspected, and the patient is allowed to fall unnecessarily into invalidism.

The close connection between certain cases of mental trouble and uterine disease cannot be overlooked with impunity. I do not refer to hysteria, which all know is commonly enough so associated, but to more serious affections, — cases of melancholia, monomania, and the like. I have seen such patients get well at once, when seclusion in an asylum was apparently near at hand, by simply removing the source of irritation, some uterine disease. We must try to avoid both overestimating and undervaluing the importance of uterine affections.

A RECENT THEORY OF PHOSPHORUS POISONING.

BY JAMES J. PUTNAM, M. D.

It is well known that ever since free phosphorus has been used in medicine, cases of more or less intense poisoning from therapeutic doses have from time to time been reported. Owing to this fact the drug has, perhaps not unjustly, borne a bad name amongst the profession at large.

Dr. J. Ashburton Thompson, of London, has recently suggested an explanation of the result of many of these cases, which, from the importance of the subject, seemed to call for careful scrutiny, especially as it is contained in a work of some size, for which Dr. Thompson's name and his strong advocacy of the use of phosphorus have secured a wide circulation.¹ He states, namely, that he has found that most of the cases of poisoning from a single or a few medicinal doses have occurred where the phosphorus was given dissolved in vegetable oil, and especially in almond oil. Under these circumstances, he believes, the phosphorus becomes partially oxidized into hypophosphorous acid, which he states,

¹ Free Phosphorus in Medicine. London. 1874.

on the authority of Devergie, to be itself nearly as poisonous as phosphorus, and moreover, apparently on the authority of Personne, to be capable of dissolving phosphorus with great readiness and of imparting to it a degree of virulence which it did not before possess.

If it be a fact that by avoiding these special preparations phosphorus can be given with comparative safety, it seemed highly important that it should be known, more especially as hitherto the solution in almond oil has been among the favorite preparations both in England and in this country.

To put this question to direct experimental test seemed, however, impossible, because, at the worst, the cases of poisoning, with whatever preparation, form a very small fraction of the cases in which the same preparation has proved innocuous, a fact which, by the way, must be held to invalidate the force of Dr. Thompson's reasoning. Therefore the explanation suggested for this supposed excessive poisonous action of the oily solutions was chosen, instead, for experimental investigation.

To test the solubility of phosphorus in hypophosphorous acid, a fifty per cent. solution of the latter was obtained from Professor Markoe, of the Massachusetts College of Pharmacy, and weighed masses of phosphorus, scraped free from oxide, were exposed to the action of carefully weighed and measured quantities of this solution for periods varying from one to four days, at the temperature of the room, and once, for an hour, at the temperature of 60° C. The phosphorus and the solutions were then re-weighed, but did not appear to have lost or gained in the least degree, except in one experiment, where the phosphorus appeared to have lost weight without the solution having gained, a result which for other reasons was due, as I was convinced, to a blunder in observation. It may be mentioned further that hypophosphorous acid did not appear as a solvent of phosphorus in a reliable dictionary of solubilities to which I had access through the kindness of Professor Markoe; and moreover that Personne, in the statement referred to above,¹ speaks not of hypophosphorous but of phosphorous acid.

To test the poisonousness of hypophosphorous acid, small quantities of the fifty per cent. solution, generally diluted from two to four times with water, were injected under the skin of frogs. It was thus found that two tenths of a cubic centimetre of the fifty per cent. solution would destroy life within twenty-four hours. Not much pain was caused by the injection itself, but the skin for some distance around became blanched, almost immediately, to a pale-blue color, and after death this, as well as the muscles beneath, was found softened, and sometimes — in cases of longer duration — either actually destroyed or (at least the muscle)

¹ Quoted from Gabler, *Bulletin Générale de Thérapeutique*, 1873. The original report of Personne is not referred to, and could not be found.

thickened and covered with a deposit resembling tough, coagulated lymph. The heart was found distended with blood.

Eight hundredths of a cubic centimetre of the same solution failed in the first experiment to kill in two weeks, though the frog remained in rather a depressed condition. At the end of that time it was killed, and marked local changes, such as those described, were found. Of two other frogs which received the same amount (0.08 c. cm.), one died after two days; the other was moribund on the fifth day. The solutions in which the phosphorus had been soaking were then given in the same dose (0.08 c. cm.) to two frogs, with results not differing materially in any respect from those just recorded.

It will be observed that if we calculate from the results of the frog experiments the dose necessary to produce analogous results in man, following the ratio of their weights, we find it to be a number of drachms at least, an amount which seems ludicrously large when we reflect that each fluid drachm of the fifty per cent. solution of hypophosphorous acid corresponds to fifteen grains of solid phosphorus.

Thinking that the poisonous action of hypophosphorous acid might perhaps be due to its acidity alone, I injected the same quantity of sulphuric acid, of about the same neutralizing power, but found that although the primary irritation was very much greater and of much longer duration than in the previous experiments, neither the constitutional nor the local inflammatory effects were nearly so great; in fact, they were almost or quite zero.

If, then, Dr. Thompson's theory is incorrect, we are left with the cause of the occasional unexpectedly poisonous action of phosphorus still as obscure as before, and must continue to use the drug cautiously and with suspicion.

We may add that in other parts of his book Dr. Thompson seems to approach his subject not in the critical spirit that every writer upon therapeutics should feel bound to exhibit, but rather in that of a partisan for his own opinions.¹

RECENT PROGRESS IN THERAPEUTICS.

BY ROBERT AMORY, M. D.

Jaborandi.²—The action of this drug has been explained by M. Gubler as follows: *Jaborandi* acts directly upon the cells in the salivary glands. From the very moment of its ingestion, these secretory cells are excited, and immediately a stimulation of the distal ends of the centripetal nerves ensues. This stimulation is transmitted to the reflecting centres,

¹ The experiments above recorded were performed, through the kindness of Professor H. P. Bowditch, in the physiological laboratory of Harvard Medical School.

² See the *JOURNAL* for September 16, 1875; *Revue des Sciences médicales*, vi. 590; *Baier ärztliches Intelligenz-Blatt*, xii. 16; *Berliner medicinische Wochenschrift*, xii. 18.

whence it returns to the glandular vaso-dilator nerves (*vaso-dilatateurs glandulaires*), whose function of keeping the vessels in a state of contraction then ceases, and these latter distribute to the secreting organs all the liquid demanded by their increased activity. M. Vulpian offers an objection to this theory on the ground that jaborandi is probably eliminated by the liver, and not by the salivary glands. This objection is based on the analyses made by E. Hardy. Other objections to the theory of M. Gubler are derived from physiology: after section of the lingual nerve above the place where its filaments are sent off to the glands, and again, after section of the pneumogastric nerve and of the cervical ganglion at the base of the skull, M. Carville has seen jaborandi produce a secretion of saliva from the submaxillary gland in as active a manner as in those experiments with these portions of the nervous system intact. Neither reflex vaso-dilating excitation nor the influence of the nervous system is necessary to induce the flow of saliva from the submaxillary glands. M. Vulpian attributes the flow of saliva and sweat to the fact that jaborandi paralyzes in the salivary and sudoriparous glands the distal end of the fibres coming from the sympathetic nerve.

Mr. Langley describes the action of jaborandi on the heart in the following words:¹ "If a few drops of the glycerine solution, or if one of the extracts, be injected under the skin of a frog or toad, the heart will become red and dilated, and the beat slower. These characters increase till the heart is of a dark red color, very much distended in diastole. I have invariably found that the ventricle stops beating before the auricles. According to Vulpian,² the auricles are the most readily affected; this certainly is not the case if it be taken to mean that the auricular beats are the first to cease. It does, however, not unfrequently happen that the auricles are the first to show the effects distinctly, beating only in every alternate heart-cycle. This has been most frequently observed after the aqueous extract has been given. At a later stage the heart-beats generally become very irregular, at one time the auricles contracting only in every alternate heart-cycle, at another the ventricle, then perhaps a complete stoppage of both occurring, followed by a few normal beats. Moreover, in point of energy the different parts of the heart-beat seem to be independent of one another; at one time the auricles contract feebly and the ventricle strongly, at another exactly the contrary. But with all these variations the ventricle has always in the many animals I have examined been the first to finally cease contracting. . . . Atropia sulphate quickly restores the heart-beat, but with less and less readiness as the heart has been stopped for a longer time. The restored beats are at first feeble, then get

¹ Journal of Anatomy and Physiology, October, 1875, page 187.

² London Medical Record, July, 1875.

stronger till an almost or quite normal beat takes place. The auricles show this effect most strikingly, and not unfrequently the auricular beat will be resumed on injection of atropia sulphate, but not the ventricular."

The preparations of this drug used by Mr. Langley contained alcohol and glycerine; and, in order to prevent any misunderstanding in regard to the effects induced by these preparations, he eliminated from his results the effects which were caused by administering alcohol and glycerine alone. He remarks also that the aqueous extract of the alcoholic residue appears to have all the properties of the alcoholic extract.

Having shown by his experiments that there is an initial exalting influence of the inhibitory action of the sympathetic nerve after the exhibition of this drug, and that this is succeeded by exactly the contrary, or a paralyzing effect, Mr. Langley offers a partial explanation of these contradictory results, and suggests that the alkaloid pilocarpine is not the only substance which contains the active principle of jaborandi, because this exalted inhibitory action of the sympathetic nerve on the heart's pulsation does not follow the use of nitrate of pilocarpine. "Nor is there any stoppage of the heart's action by an increased stimulation of the pneumogastric [by means of a Du Bois Reymond induction coil], if the strength of the shocks be increased. Two or three drops of a five per cent. solution of nitrate of pilocarpine are sufficient to produce this state. Further, it will be found that stimulation of the sino-auricular line will no longer stop the heart. Here then we have a substance which, as it is usually expressed, paralyzes the inhibitory fibres of the pneumogastric. Now this substance is contained in jaborandi in very small quantity, and consequently, when jaborandi is given, the pilocarpine contained in it requires some length of time before it can produce its proper effects; hence it is not until a late stage that we find the inhibitory fibres paralyzed."

Experimenting still further by placing an extract of jaborandi in direct contact with different portions of the heart tissue, Mr. Langley observed that the muscular tissue thus in immediate contact with the extract ceased its efforts at pulsation and became pale and contracted. This tonic contraction ensued after the topical application of the aqueous as well as of the alcoholic extract, and consequently could not be attributed to the action of alcohol. Moreover, after wiping away the jaborandi extract from the ventricle, after this phenomenon had been observed, and then sponging that organ with atropia solution, "its pale, contracted condition gave place to one of flaccidity." Reasoning upon the basis of his own experiments and of those by Vulpian on striated muscular fibre, Mr. Langley rejects the theory that jaborandi acts through the pneumogastric or any other nerve-fibres, and proposes as a simpler theory "that jaborandi (and therefore of course atropia also)

acts directly on the whole neuro-muscular cardiac tissue, in what exact manner must be left for future inquiry."

Some of the practical points of the effect upon the circulation derived by Mr. Langley from his experiments are as follows: "Jaborandi, in whatever form injected, causes a slowing of the rate of heart-beat (whether the vagi are cut or no) and a fall of blood-pressure.

"The fall of blood-pressure does not depend solely on the lessened rapidity of the heart's beat. By injecting slowly, often the first effect visible is a fall of the blood-pressure without an appreciable slowing of the pulse. The fall then resembles in a remarkable degree that caused by stimulation of the central end of the depressor. . . . Moreover, when atropia is given, the blood-pressure does not rise to its former level, although the rapidity of beat be restored. Jaborandi given after atropia still causes a fall in the blood-pressure, though not so considerable as in the absence of atropia."

Dr. Craig states¹ that erroneous impressions prevail as to what portion of the drug contains the active principle; Rabuteau, of Paris, concluding that it resides in an alcoholic residue from an aqueous solution, and Mr. Martindale attributing it to the "dregs" (pieces of the stem, leaves, and petioles), the strained solution producing but little effect. Dr. Craig had prepared for his use in clinical experiments a substance called pilocarpine; but he does not give the method of its preparation. This substance, he says, "is of a semi-fluid consistence, of a yellowish color, and possessed of an agreeable odor. It is soluble in water, and is very active. One grain of this pilocarpin is nearly as active as one drachm of the leaves." Dr. Craig used small doses of the infusion every few hours, and in several cases of fever characterized by a dry tongue and a parched mouth he was enabled to restore the flow of saliva and to keep the mouth and tongue moist. "He has never found jaborandi affect much either the heart's action or the temperature of the body, and he has watched carefully for the disturbance of the vision observed by Mr. Martindale and others, but as yet has failed to observe it. He believes that many of the untoward results ascribed to jaborandi are due to the fact that dregs have been swallowed in addition to the strained infusion."

Dr. Craig believes it to be a very valuable drug for removing pleuritic effusions.

According to MM. Bochefontaine and Galippe, the bark is the most active portion of jaborandi. MM. Hardy² and Vulpian³ also note that the active principle of the plant is an alkaloid which can easily be separated from an infusion of the leaves and bark. This alkaloid, pilo-

¹ Edinburgh Medical Journal, January, 1876.

² Gazette médicale, iv., 1875, page 309.

³ Le Progrès médical, 1875, page 229.

carpine, may be isolated by means of phospho-molybdic acid, or by ammonia. Hardy and Vulpian found that its effect on the heart and salivary glands was similar to that caused by the infusion of the stems and leaves of jaborandi. The proportion of this alkaloid in jaborandi is but 0.75 per cent.

Cholagogue Action of Aloes, Podophylline, Rhubarb, Calomel, and other Cathartic Medicines.—In the report of a committee of the British Medical Association in regard to the amount and character of the bile which flowed from permanent biliary fistulæ in dogs that were subjected to a fixed diet and to the administration of various substances, it is stated¹ that “spontaneous diarrhœa, dysentery, and purgation, produced by pilula hydrargyri, calomel, corrosive sublimate, and podophylline, always diminished the solid constituents of the bile, and, with one exception, the fluid portion of the bile also.”

Röhrig² observed that in fasting animals subjected to the calming action of curare, croton-oil in large doses increased the secretion of bile, and that colocynth, jalap, aloes, rhubarb, senna, and magnesia sulphate likewise had some effect in increasing the flow of bile, the amount of influence from each being in the order above stated; moreover, the use of calomel rather tended to promote the flow of bile if given during the secretion, but would not originate the secretion after it had ceased. In commenting upon these results Dr. Rutherford and M. Vignal³ observe that “Röhrig’s statement with regard to calomel does not much differ from that made by Hughes Bennett’s committee, and he made no experiments with podophylline and taraxacum, nevertheless, he did find that certain purgative agents, when given to animals that are fasting, increased the biliary secretion, while the committee found that in non-fasting animals, purgative action induced by podophylline, calomel, etc., diminished the amount of water and solids of the bile secreted in the twenty-four hours.”

Not being satisfied with the condition of the subject, Dr. Rutherford, who was the reporter of the committee of the British Association, has performed, with the aid of M. Vignal, some additional experiments upon dogs that had in nearly every instance fasted about eighteen hours. These animals were curarized and artificial respiration established, after which the abdomen was opened along the linea alba, and a glass canula inserted into the biliary duct near its junction with the duodenum. The bile was then allowed to flow into a fine cubic-centimeter measure, and a record was kept of the quantity secreted every fifteen minutes. In many cases this bile was analyzed, and the alimentary canal was examined post mortem. The errors which are liable to occur from

¹ British Association Report, 1868, page 229.

² Experimentelle Untersuchungen über die Physiologie der Gallenabsonderungen, Stricker’s Jahrbücher, 1873, page 240.

³ Journal of Anatomy and Physiology, January, 1876

mechanical obstruction to the flow of bile or from an irregularity in the movements of artificial respiration were eliminated as carefully as possible. Curare was used on account of its property of paralyzing voluntary movements, and with proper care and doses the biliary secretion was not apparently affected by this medicinal agent. As a still further caution, the animals were allowed to recover from the surgical operation, before the regular record was taken. The curare solution (one minim to each milligramme of water) was always injected into the jugular vein.

Controlling experiments upon the curarized dogs, in which no other medicine was administered, were first made in order to establish the proper rate of secretion and the character of the bile. It is to be noted that in these experiments the composition as well as the quantity of the bile was nearly constant. The results of the experiments on the various cholagogues may be thus summarized:—

(1.) *Croton-oil* in almond-oil (fifteen grains to sixty minims, six grains to sixty minims, three grains to sixty minims) showed very little, if any, increase in the amount of bile secreted during two or three hours after its injection into the duodenum. In the experiment with the largest dose, the autopsy revealed impending purgation in the small intestines, whilst in that in which the smallest dose was given there was no evidence of purgation.

(2.) *Water* injected into the duodenum appeared to have no effect upon the biliary secretion.

(3.) *Podophylline* in an aqueous solution (of a strength varying from six grains in nine centigrammes of water to ten grains in ten centigrammes of water) caused an increased flow of bile, commencing one hour after the injection into the duodenum and attaining its maximum in three or four hours; but at the end of six hours the flow became perceptibly less. This drug produced an increased vascularity in the upper portion of the small intestine, and also other evidences of slight purgation. Presuming that the slight purgative effect was due to the insolubility of podophylline in water, other experiments were made with this drug dissolved in bile. This caused a very serious purgation, and a very rapid increase in the amount of bile, but in an hour and a half afterwards this increase was succeeded by a very rapid diminution. An analysis of the bile secreted after the podophylline showed that the especial bile-solids were not diminished, whilst the amount of mucus secreted was materially lessened. In short, the action of podophylline may be summarized thus: (1.) When injected into the duodenum of a fasting dog, it increases the secretion of bile. (2.) "When the bile is prevented from entering the intestine, podophylline acts less powerfully and less quickly than when bile is introduced." (3.) A severe purgative action diminishes the amount of bile secreted. (4.) Purgation

from podophylline is probably due to a local action. (5.) "The bile secreted under the influence of podophylline, although it may be in increased quantity, contains as much of the special biliary matter as bile secreted under normal conditions."

The action of *aloes* was as follows: "(1.) Sixty grains of the extract of Socotrine aloes, when placed in the duodenum, powerfully stimulated the liver. (2.) Under its influence the liver excreted a greater quantity of biliary matter in a given time, although the bile was rendered more watery. Coincident with the marked action on the liver, there was only a slight purgative action."

Rhubarb was shown to be a very remarkable hepatic stimulant, doses of from seventeen to thirty grains never failing to increase the biliary secretion within half an hour after administration, and that far less intestinal irritation occurred than after the use of aloes and podophylline. The percentage-amount of the special biliary matter was not diminished by rhubarb.

Senna was shown to be less powerful than rhubarb as an hepatic stimulant, and rendered the bile more watery.

Colchicum acted as a hydro-cathartic, and increased the amount of biliary matter excreted by the liver, but rendered the bile more watery.

Taraxacum and *scammony* were very feeble hepatic stimulants.

Calomel gave the following results: "(1.) An increase of the biliary secretion followed the administration of two successive doses of ten grains of calomel in one case. Diminution of the secretion was the only result of the same doses given under similar circumstances in two other cases, and it was the most definite result of the administration of four successive doses of three grains in another case. (2.) In all the four experiments the calomel had a purgative effect. (3.) Analysis of the bile secreted during calomel-purgation showed that notwithstanding a diminution in the quantity of bile secreted, the percentage-amount of solids had become less."

Gamboge, a hydro-cathartic, diminished the secretion of bile, thus acting in a contrary manner to colchicum, which is also a hydro-cathartic.

Castor-oil has scarcely any effect on the hepatic secretion, and this result was similar to that obtained by Röhrig.

Thus it will be seen that podophylline, rhubarb, aloes, and colchicum are the most active stimulants of the dog's liver; and, moreover, Dr. Rutherford states that "the increased discharge of bile was not owing to contraction of the gall-bladder, for this in all cases had been well-nigh emptied by digital compression, after which the cystic duct was clamped at the beginning of the experiment." In comparing these experiments on fasting animals with the experiments of Hughes Bennett's committee on non-fasting animals, Dr. Rutherford further states that

the above substances excite the liver to secrete more bile. If purgation result, the absorption of biliary matter and of food — if digestion be taking place — from the intestine is probably diminished. Thus by the twofold operation of increased hepatic action and diminished absorption of biliary matter from the intestine, the composition of the blood as it passes through the portal system is probably rendered more pure. He moreover suggests a point of great practical interest: namely, "That powerful purgative action tends to diminish the biliary secretion." It must be borne in mind that the foregoing experiments directly apply to the healthy dog only.

(To be concluded.)

SEGUIN'S MEDICAL THERMOMETRY.¹

IN 1871 a book bearing the same title as the work here noticed was published in New York as the joint production of C. A. Wunderlich and E. Seguin. In the new form the name of the distinguished German is omitted from the title-page. The work is larger by one hundred and sixty pages than its predecessor. The reader, whom we will suppose to be unfamiliar with this former edition, learns from the short preface that this "much-demanded second edition will be found to contain the material to which the success of the first was due; the restoration of old observations containing germinal truth yet undeveloped; the latest thermic experiences that could be gathered to date," etc.; and, finally, that "by the force of its documentary evidences this book is from Wunderlich, Roger, S. Ringer," and fifteen other eminent German, French, and English investigators, but that "by its unity of plan and by the convergence given by its documents towards a Hippocratic renaissance," Dr. Seguin is "bound not to decline the authorship."

However zealous and good-natured the reader may be, he cannot get far into the first of the two great divisions of the book, Human Temperature, without having his patience sorely tried by the language — certainly not English — and by the frequent obscurity and false taste of the style. Let the following serve as specimens. "Infantile temperature is from the beginning subject to so many causes of versatility that few robust men could stand it. Then its changes of type about the seventh day, an inward danger added to the external casualties which make its study dramatic from thence, at least till the seventh year. But above this artistic impression the humane one suffices to raise our interest to the pitch of devotion." Again, after speaking of the fact proved by Gavarret, that, if the working man spend more heat than his food, etc., can furnish, sooner or later his temperature will fall below normal, and he will be left without reaction, the author goes on, "Therefore, whoever appropriates to himself the equivalent in produces of this sacred 37° C., the norme upon which every one without exception ought to live, eats up in frac-

¹ *Medical Thermometry and Human Temperature*. By E. SEGUIN, M. D. New York: William Wood & Co. 1876.

tional equivalents the thermal substance — calorics — of his fellow women and men. With this difference, however, that the direct anthropophagist is contented with a few pounds of human flesh, but the civilized anthropophagist consumes night and day, thousands of calorics which are others' life." Such words as "concepts," "desaggregation," "limitate," "internotion," "deperdition," occur here in every page.

If the undaunted reader holds out until the seventh chapter, he will be rewarded by finding the style become more temperate and less rhetorical, the new-coined words scarcer, and the valuable facts more numerous. Cheered up, he reads through several chapters on changes of temperature, their causes, types, and meaning, with entire surprise at the alteration for the better in the book. This feeling increases, as he peruses the chapter on the course of febrile temperatures, to an uncomfortable suspicion, which becomes almost a certainty when he passes on to the chapter on temperature in special diseases and looks at the typical curves of each disease. He goes to one medical neighbor and borrows Wunderlich's *Eigenwärme*, to another for Woodman's translation of the same, and finds that about half of this book (not counting the appendix), and that the better half by far, is taken almost verbatim, though a little condensed and rearranged, from the latter work. To be sure, Wunderlich is often, and always admiringly, alluded to, but in such a manner that no person who did not know his book would dream what use had been made of it. Of the fever-curves, which are more than seventy in number, nearly three quarters are taken from Wunderlich's beautiful charts, with little or no acknowledgment. Here and there observations of other experimenters, or an original comment or statement, are sandwiched in between Wunderlich's sentences.

"Apparent rari nantes in gurgite vasto."

At the end of the first chapter (historical and mainly from Wunderlich), Dr. Seguin calls Wunderlich the "hero of medical thermometry," and gives great credit to him for the "first demonstration of some laws of uction in disease." The last thirty pages of Part I., devoted mainly to temperature in pyretic and in nervous diseases, and in diseases of senility and extreme infancy, have more original matter; authorities are quoted and borrowed curves acknowledged. A few pages at the end are given to unsatisfactory discussion of the regulation of animal heat, and last of all comes this dictum, "Calor is the ultime perceptible phenomenon between 'to be and not to be.'" "La chaleur, c'est la synthèse."

Part II., on Human Thermometry, seems to be original, and is a very earnest plea for the use, or, as the author would say, the *revival* (Hippocrates and his school took temperature by the hand), of the clinical thermometer in the family and school as a constant guide and referee. Dr. Seguin deplors the three varying scales of Fahrenheit, Réaumur, and Celsius, and naively proposes a fourth, "the physiological," invented by himself, having its 0 at 98.6 Fahr. He offers rather confusing blanks to busy mothers to fill out daily with figures for the doctor, but does not make out a strong case for these instead of the admirable method of fever-curves in use in most hospitals.

The book ends with fifty pages of appendix of valuable tables of temperature, collected from various writers, and with a very large bibliography.

The part contributed to this book by the "author" is the least valuable, though much precious matter has been collected. Were it not for the wrong done to Wunderlich by the omission of his name from the title-page, it would be pleasant to see this mark of almost youthful energy in a physician far advanced in years, in a cause so vital as the study of human temperature.

KOBER'S URONOLGY.¹

THIS is a pamphlet of one hundred and seven pages, reprinted from *The Richmond and Louisville Medical Journal* for September, October, November, and December, 1874. It can be considered as specially devoted to neither the theoretical nor the practical part of the study of the urine, and there is no subject which is at all exhaustively treated from either the chemical or the clinical point of view. Sometimes the old chemical nomenclature is used and sometimes the new. Among the errors which occur may be mentioned the statement that microcosmic salt (ammonio-sodic phosphate) is one of the constituents of the urinary sediment, its crystals being found with those of triple phosphate in putrefying urine, and being affected in the same way by chemical reagents.

The method for the systematic analysis of the urine is by no means adapted for the physician's office, since many of the processes recommended require for their performance the facilities of a well-arranged chemical laboratory.

E. S. W.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

CHARLES W. SWAN, M. D., SECRETARY.

DECEMBER 11, 1875. — The president, DR. HODGDON, in the chair.

Congenital Malformation. — DR. BROWN related a case combining a malformation of the foot and a distortion of the leg, which had been noticed in the same condition as now seen, at the time of birth. The child is eight weeks old, well nourished and fat, and apparently in perfect health. The mother is an American woman of the middle class, a primipara. The period of gestation had been entirely normal, and the course of life quiet and easy from the time of conception. The mother had experienced no shock, fall, or other accident with the exception of an apparently insignificant trip on the sidewalk a week before labor set in. At the period of gestation when a malformation might be supposed to have had its commencement, there was positively no disturbing circumstance. In the fall near the close of gestation, she had slipped and come down upon her hands, not striking on the abdomen. This fall had been followed by no ill result, and fetal motion had continued as before.

¹ *Uronology and its Practical Applications.* A Guide to the Examination of Urine and its Diagnostic Value, with Extracts from the Works of the most Modern Investigators. By GEORGE M. KOBER, M. D., Member of the Clinico-Pathological Society and Medical Society of the District of Columbia.

She had been attended by a female physician, under whose care labor had occurred naturally, lasting seven hours, the head presenting.

The distortion consisted in an obliquity of the tibia and fibula inward at the junction of the middle and the lower third, the bones presenting every appearance of having been fractured, union taking place at an angle of nearly 45° . The angle was a sharp one, no bending of the bone such as might be looked for in a green-stick fracture being apparent in the limb at this or at other points. The lower fragment presented sharp spicula of bone which were easily felt beneath the skin. A slight amount of callus was present. The union of the fragments was entirely firm, and was stated to have been so at the time of birth.

The malformation consisted in an abnormal position of the foot, and in the absence of certain toes. The foot was so placed as to suggest a dislocation outwards, the articulating surface of the astragalus being beneath the outer malleolus. The ligaments at the ankle were very lax, and the astragalus and os calcis abnormally small, as was the case, indeed, with the whole foot. The two smallest toes were wanting, no vestiges or representatives being seen, and no cicatrix or dimple suggesting intra-uterine amputation at any period of foetal life.

The questions of interest in the case concern the decision of the periods at which the various deformities took place, and, in like manner, the causes of the same. The malformations in the foot would seem to have occurred at an early date in foetal existence, and to have been dependent on the causes usually determining such anomalies, whatever those may be. It seems safe, however, to assert that the distortion of the leg was due to fracture occurring during the last weeks of gestation. Had it occurred earlier a simple bending would have resulted, or a green-stick fracture, which would have given a different shape to the limb from that which it presented, whereas the angle was decided and sharp. The presence of the malformation and the distortion would seem to be a coincidence, depending on each other, perhaps, as showing a general condition of the system.

DR. FIFIELD did not know of any published work that refers to these things. At the Royal Orthopaedic Hospital, this summer, he saw a child with dislocation of both hips. Mr. Bernard Brodhurst said that these cases were not so very uncommon, and that they were frequently overlooked. Mr. Brodhurst stated his belief, well supported by facts, that such dislocations were not congenital, but were due to violence during delivery. In these cases it had almost always been found that the child had presented feet foremost, or that version or some other operation had been performed. Dr. Fifield spoke of two cases recently under his observation at the City Hospital. In one there was a dislocation of the hip on the pubes; the other, sent as a case of hip-disease, Dr. Fifield diagnosed as a dislocation of the hip on the ilium. He measured and found an inch and a half shortening. The child had always been in the same condition. If this could be established, that these cases are not congenital but are due to some accident at the time of labor, it would be a very important decision. He questioned whether Dr. Brown's case should go on record as congenital.

DR. ABBOT asked if it were not possible that the apparent fracture were really simply a deformity, especially in view of other true deformities actually present.

Miscarriages in a Subject of Syphilis.—DR. FORSTER read the following case: Mrs. L., thirty-one years of age, American, was married at twenty; she had always enjoyed good health with the exception of dysmenorrhœa. Soon after marriage she became pregnant, and when three months in that condition had an abortion performed; since then she has miscarried eleven times. Her pregnancies have terminated as follows:—

Second, at the seventh month, the premature labor being attributed to a blow upon the abdomen.

Third, at the seventh month, without any assigned cause.

Fourth, at the fifth month, after an attack of vomiting.

Fifth, at the seventh month, cause unknown.

Sixth, at the third month, being, as the patient says, “a false conception,” and following a fall with a wash-tub.

Seventh, at the sixth month, after lifting a heavy overcoat.

Eighth, at the fifth month, cause unknown.

Ninth, at the seventh month, after a chill.

Tenth, at about the fourth month; membranes unruptured.

Eleventh and twelfth, at the sixth month.

With her fourth pregnancy cloasma of the forehead appeared, and still remains. After her sixth pregnancy she was treated for metritis and afterwards for a displacement, for which she wore a pessary for about two weeks; she has otherwise made good recoveries. She has had no symptoms of syphilis which I have been able to detect, other than these repeated miscarriages. Her husband acknowledges to have been treated for a venereal sore three years before his marriage, but has never had any secondary symptoms. I have been in attendance during the tenth, eleventh, and twelfth miscarriages. After the eleventh I placed both the husband and wife upon an anti-syphilitic treatment, but I fear it was not followed longer than a few weeks. Both parties are anxious for a living child, and are at present under treatment.

The fœtus and placenta have been examined by Dr. Fitz each time that I have been in attendance.¹

Partial Placenta Prævia and the Site of the Placental Souffle.—DR. DRAPER read the following case, to illustrate the value of the placental souffle as a diagnostic sign in placenta prævia. “Mary D., aged twenty-eight years, a primipara, was married June 8, 1874, within thirty-six hours after the cessation of a menstrual period. The catamenia did not recur, and the usual symptoms of pregnancy developed in due time. Morning sickness continued about two months, and was severe during that period.

“In September the patient slept one night in a freshly painted room. This exposure induced an attack of severe vomiting, which lasted twenty-four hours and produced considerable temporary exhaustion.

“In December she consulted me for the relief of a pain, neuralgic, intermittent, and, as she said, ‘binding’ in character, confined to the left groin and left lumbar region.

¹ See JOURNAL of December 2, 1875, page 648.

"In the night of January 14th I was summoned in haste by a message that the patient was flowing. I found her in bed, anxious, but without much general disturbance. She stated that she had gone to bed at nine o'clock the previous evening, after a day of no more than the usual exercise or fatigue. She had been awakened at half past eleven by feeling her clothing wet; on examination she found that she was flowing. There was no pain nor any unusual sensations attendant on the hæmorrhage.

"On vaginal examination I found that the os would admit the index finger to its first joint, the lips of the os being thick, firm, and high up. Within the os, the finger came upon a pulpy, spongy mass. The patient was flowing somewhat at the time, but the examination did not increase the hæmorrhage, and it soon ceased altogether. At this time the patient was just entering the eighth month of pregnancy.

"At the visit the next day, everything was entirely quiet, and I determined to see if my fears would be confirmed by any signs afforded by auscultation. The walls of the abdomen were spare, and the souffle ordinarily called placental was unusually distinct. Indeed, it was possible to determine its limits with great exactness. It was loudest within and above the anterior superior spine of the ilium, in a line toward the umbilicus. It was quite distinct over Poupart's ligament and indistinct over the symphysis pubis. The sound shaded away, as it were, from the first-mentioned point of maximum distinctness. The fetal heart-sound was heard just to the left of the umbilicus."

Six days after the first hæmorrhage, the patient had another, less severe; and three days later, another attack occurred, lasting two or three hours. About the first of February, three weeks after the first bleeding, the most urgent attack of all came, and during Dr. Draper's unavoidable absence the patient was delivered of a still-born fœtus by Dr. G. L. Underwood, by gradual manual dilatation and version. He found a partial placenta prævia, the placental site at its lower margin involving the os and covering it.

DR. FIFIELD said that, so far as he knew, the existence of a placental souffle has never been denied, but there has been some difference of opinion as to the production of a similar sound by the presence of fibroids. Dr. Fifield asked whether the sound were so situated in the case reported as to determine the diagnosis.

DR. DRAPER replied that the murmur was loudest at a point considerably lower than it is usually found.

DR. CHADWICK remarked that if the souffle referred to is of placental origin, it ought, in the vast majority of cases, to be most plainly audible over the fundus of the uterus, since the placenta is commonly found in that part of the uterine cavity.

DR. DRAPER asked if there was not a marked difference in degree or pitch between the placental souffle and the sound caused by the presence of a fibroid tumor.

DR. FIFIELD replied that the opportunities for careful comparison were rare, and that it was difficult to state positive differences. He referred the society to some observations on this subject made several years ago by Simpson.

DR. LYMAN spoke in this connection of a patient who was brought into the City Hospital in consequence of a sharp attack of acute dysentery. She was five or six months advanced in pregnancy. In this case the placental souffle was very low down, just over Poupart's ligament, and confined to a space not more than two inches in diameter. The patient had had no hæmorrhage, nor was any anticipated.

DR. FIFIELD said that the placental souffle varied greatly in intensity at different times.

DR. BOARDMAN remarked that he had a case under observation at the present time which might perhaps illustrate the difference between the placental and the fibroid souffle. A patient with a large uterine fibroid furnishes a souffle more like the murmur which is afforded by a small aneurism, differing in pitch and intensity from the loud rushing sound of the utero-placental souffle, as commonly observed. Moreover, pressure on the tumor at several points and also in neighboring localities, notably upon the hæmorrhoidal vessels, conveys to the finger distinct thrills which suggest to the ear sounds similar to those heard by means of the stethoscope.

DR. CHADWICK raised the question whether the pitch and intensity of the sound would not vary at the different stages of pregnancy, and thus their value in the differential diagnosis of fibroid tumors and pregnancy be nullified.

DR. REYNOLDS mentioned the fugitive and changing character of these sounds as reported by some observers, and the doubts expressed as to their diagnostic value on this account.

Subacute Cystitis following Parturition. — DR. RICHARDSON read an account of three cases of subacute cystitis following delivery. The paper was published in the *JOURNAL* for February 3, 1876.

DR. FIFIELD called attention to the caution given by Dr. George Johnson, in his work on the diseases of the kidneys, not to confound certain cases of cystitis with Bright's disease. Dr. Fifield had had himself, a few years ago, a case of cystitis produced by long exposure to severe cold; in that instance pus and blood-corpuscles occurred in the urine, together with albumen. The disease passed off without local treatment.

DR. BOARDMAN suggested that in the cases reported by Dr. Richardson the disease had arisen from the decomposition within the bladder of portions of the urine retained from time to time in consequence of partial paralysis, the result of long pressure upon the bladder during labor, the organ being thus rendered unable to empty itself completely.

DR. WELLINGTON said that Dr. Sullivan, of Malden, had recently reported to the Middlesex South District Medical Society two cases of women in whom cystitis with purulent discharge seemed to have been determined and maintained by the exhaustion resulting from lactation. When the children were weaned, the trouble ceased. Dr. Wellington recalled in his own practice two or three severe cases similar to those reported by Dr. Richardson. In these there was a large amount of pus in the urine, and a good deal of general disturbance. In one case the trouble followed a tedious labor terminated by instruments.

DR. FIFIELD spoke of a case in which there was the production of cystitis,

with some pain, by anæmia from long-continued nursing, the symptoms ceasing when the child was weaned.

Menstruation as a Pathological Phenomenon. — DR. ABBOT remarked that the question of the true nature of menstruation and its relation to ovulation had of late been considerably discussed; and Professor King, of Washington, in a recent article in the *New York Medical Journal* had labored to prove that it is essentially a pathological phenomenon, the normal condition of a mature woman being either that of pregnancy or that of lactation. As bearing upon this question Dr. Abbot mentioned the case of a lady, the patient of a member of this society, whom he had attended in confinement during the past summer, in the temporary absence of her physician; her normal condition was that of catamenial irregularity.

It was the fourth confinement of the patient, and occurred ten months after the last catamenial period. The labor was short and comparatively easy. The health of this lady was exceptionally good. She was remarkably robust and vigorous, and had never suffered from backaches or other signs of uterine disturbance. She had never menstruated regularly, the intervals between her menstrual periods having generally been from three to six months, and only two or three times in her life so short as four weeks; the flow was painless. She has two sisters who are not in as perfect health as herself; they are subject to the exhibition of strongly-marked nervous symptoms, but possess a high degree of intellectual development, and are quite regular in menstruation.

DR. INGALLS mentioned the case of a young woman who five years ago, at the age of twenty-five, consulted him with regard to menstruation. This function had never appeared. The patient was short, stout, healthy-looking, and had always been perfectly well. She was advised never to suffer any attempts to bring about the catamenia, so long as her health was unimpaired.

Is Absorption of Liquor Amnii possible? — DR. ABBOT said the question had been raised whether the liquor amnii can be to a great extent absorbed before the birth of the child. He had been called to a very delicate lady about being confined, whose condition was a source of some anxiety. One month before her confinement he had examined the abdomen with reference to the position of the child, and found a very large quantity of liquor amnii, while the child, small and very movable, was lying directly across. At labor, the head presented normally, and the amount of liquor amnii was considerably less than is often found in normal labors. The child weighed from eight to nine pounds.

DR. REYNOLDS inquired for the particular signs of the presence of a large amount of liquor amnii.

DR. ABBOT replied, that the uterus was large, and the child seemed small and floated about very loosely, although the abdomen was not larger than is usual at that stage of pregnancy.

DR. REYNOLDS said it seemed to him a very nice point of diagnosis. In such a case he would ask if a relaxed and supple condition of the uterine walls might not explain the symptoms attributed to an undue amount of liquor amnii.

DR. ABBOT answered that the uterus was not flaccid, but, on the contrary,

quite tense. He had seen other cases in which he had diagnosticated an excess of liquor amnii, which had been verified at the labor; and in one instance was complicated by the presentation of a hand and a foot. The apprehension of such an occurrence in the case reported led him to request that he might be called at the very first symptoms of labor.

DR. REYNOLDS, in reviewing the case, remarked upon the facts of a fœtus not small, in an abdomen not remarkably distended, and yet the conviction on the part of the reporter that there had been a large amount of liquor amnii.

Dysmenorrhœa. — DR. MINOT reminded the society of certain cases of dysmenorrhœa relieved by valerianate of zinc, which he had reported at the meeting in April.¹ He desired to say that two of those cases had recently come under his notice, and in both the effect of the remedies appears to have been permanent. The dose administered was one or two grains, three times a day, beginning twenty-four hours before the expected catamenia. When begun after the pain has set in, the effect of the remedy has not been so good, but even then considerable relief has been afforded.

DR. COTTING remarked that on hearing the report of Dr. Minot's cases he made immediate trial of the remedy in a very severe case, which had up to that time resisted all remedies prescribed for it. Its first effect was admirable, the patient suffering little or nothing on the first two occasions, but it gradually became as ineffectual as any other remedy tried previously in the same case.

DR. MINOT said that of course it was necessary to test a remedy repeatedly in order to ascertain its exact value, but the effect of the valerianate in the cases reported made it seem desirable to bring it to the notice of the society for a more extended trial.

In answer to a question, Dr. Minot stated that in one of the cases, that of a patient of nervous temperament, who had always extruded a membranous, shreddy mass with the menstrual flow, he had made a uterine examination, with the following result, as copied from notes made at the time: the uterus was low, with a slight inclination backwards, and tender; the sound entered without any difficulty, to the normal distance. There were no granulations or abrasions about the os.

DR. LYMAN added that he had prescribed this remedy soon after the report of Dr. Minot's cases; in one instance there was great relief the first time, and none subsequently; and in two other cases no effect whatever followed.

ANDRAL'S DEATH.

THE great triumvirate of the Paris Medical School of forty years since, namely, Andral, Chomel, and Louis, has at length wholly passed away. Andral, the last survivor of the three, died very recently.

American medical students of former days who visited Europe for the purpose of learning what Europe could teach them, will well remember all three of these noble specimens of manhood. Andral was justly considered the most

¹ JOURNAL, August 12, 1875.

accomplished professor of the school. Doubtless many still remember the admirable lectures he delivered during the winter of 1832-33 on diseases of the brain, and those on internal pathology in 1833-34. As they glance over their notes taken at the time they will be reminded of the scope of his intellect and likewise of his skill in the management of an immense medical class, composed as it was generally of an untrained set of youths, little disposed to pay respect except to real ability. It could pour out its contempt and even ridicule upon Broussais, who, while tottering with age, still boldly and at times almost fiercely defended his theories, which were beginning to fall under the influence of modern modes of scientific research, namely, those of close observation and of strict deduction from facts. Andral was the ablest and most delightful lecturer on these newer ideas at the school of medicine. Chomel was the great clinical teacher.

At that time no medical student would have thought of visiting any other place than Paris in order to finish his medical education. There were congregated young men from every country, as in earlier times they were found at Leyden, and as now at Vienna and Berlin. But Germany in 1832 was a *terra incognita* for medical students, as much as Russia or the far East would be to those of the present day.

Andral's lectures were full of learning, very carefully prepared, and methodically arranged. He seemed to have everything under his eye, and from his retentive and all-grasping memory he could marshal fact after fact in elucidation of any subject to which he called our attention. And he did this so easily and so admirably that he charmed every one in the vast amphitheatre of the school of medicine. Entire silence prevailed the instant Andral commenced speaking. No student ever thought of interrupting him.

He was the intimate friend of Louis and of Chomel, and while independent in the expression of his own views and the use of his own methods of teaching, he was, like Chomel, a firm supporter of Louis' numerical method of study. He had, however, what Louis lacked, namely, a winning eloquence of language, and a more generalizing habit of mind, which with his vast resources of acquired learning made him unequaled as a professor of medicine. The great influence which Louis' strict method had over him was quite perceptible. Had Andral been born a century earlier, amid the medical ideas then prevalent, he would have been eminent as a great system-maker, as Boerhaave and so many others had been. Swayed as he was by Louis, he had immense influence for good over the youths before him. When he died we lost one of our greatest and noblest teachers.

Andral was born November 6, 1797. In 1821 he presented his thesis and received his medical degree. He rose rapidly in reputation, and in 1828 was elected to the professorship of hygiene. In 1836 Des-Genettes was restored to the chair of hygiene, and Andral was called to that of internal pathology. In 1839, at the death of Broussais, Andral succeeded him in the chair of general pathology.

In 1823 he was made member of the Academy of Medicine, and in 1843 was elected to the Academy of Sciences.

His various published works will always remain as monuments of his fame.

Among them are his Clinique Médicale ; his Digest of Pathological Anatomy ; a Treatise on Mediate Auscultation, and one on the Heart ; three volumes on Internal Pathology ; and finally, several years after the above were published, he and Gavarret printed their Researches on the Blood.

In 1866 his wife, the daughter of the celebrated Royer-Collard, to whom he was tenderly attached, became seriously ill and suffered greatly. For her sake he resigned his extensive practice in Paris and retired to Château Vieux, and there for the remainder of her invalid life he devoted himself with entire self-abnegation to her comfort and consolation. She died only a short time ago, and her husband has soon followed her. These last years of his life seem to those who knew him in the days of his early manhood and of his fame as a most fitting termination of his life. They seem appropriate, and what might have been anticipated from all that was known of him as a public lecturer or private friend.

As the *France Médicale* (from which journal we draw some of the above data of his life) justly says when referring to his death, "He was full of tact, of goodness, and of dignity. He was sought for by all his professional associates for these qualities and because of his accuracy of judgment and wise treatment."

He died on Sunday, February 13, 1876, aged seventy-eight years. "His death produced a profound sensation in all professional and scientific circles of Paris." The Academy of Medicine adjourned immediately after receiving the announcement of the fact. At his funeral a large crowd of savans, of officers of the state, of physicians and students, assembled to pay due honor to one of the greatest medical minds this century has seen.

MEDICAL NOTES.

— The reception held at the rooms of the Medical Library Association was attended by a large number of physicians of this city and its suburbs. The number of volumes at present in the library amounts nearly to three thousand. A portion of these are loans from societies, the rest being gifts from private libraries. There are also from sixty to seventy files of medical journals which are received regularly and promptly. The larger portion of the books are sets of the best English, French, German, and American journals. The rooms of the association consist of a library and reading-room. They are pleasantly situated, and in a very accessible portion of the city. Steps are being taken to obtain an act of incorporation. The association is especially indebted to the Society for Medical Observation, whose library has been deposited with them, and also to Dr. William Read for his library of obstetric works, which is almost complete in the English literature of the subject. Books have also been received from a large number of other physicians. All physicians living beyond a radius of twenty miles from the city are invited to become the guests of the association when visiting the city. The library promises to become a very valuable one.

LETTER FROM BALTIMORE.

[FROM OUR OWN CORRESPONDENT.]

MESSRS. EDITORS, — With the end of February come the commencements of our medical colleges, of which Baltimore has its share, numbering now four, namely, the Medical School of the Washington University, that of the University of Maryland, the College of Physicians and Surgeons, and last, but not least, the Medical Department of the Johns Hopkins University, which is rather a thing of the future than otherwise, as the university was founded only the day before yesterday. The school of medicine of the Washington University held its ninth annual commencement yesterday, when the degree of doctor of medicine was conferred by Dr. Charles W. Chancellor, President of the State Board of Health, upon thirty-two graduates. The ceremony took place at Ford's Grand Opera-House. The dean, Dr. James E. Lindsay, presented his report, attesting the continued and increasing prosperity of the university. He referred to the new building that had been erected during the last year as giving better anatomical rooms and five additional wards. Since March 1, 1875, one thousand and twenty patients had been treated in the hospital, six thousand two hundred and six in the general dispensary, and one thousand and fifty-one in the dispensary attached to the school, making a total of eight thousand two hundred and seventy-seven sick and wounded, many of them without money or friends. During the year seventy students have been instructed, and of that number thirty-two had graduated. The hospital, he said, had at all times a skillful physician and surgeon, with trained assistants, and improved appliances to succor those who from sudden and violent illness or from injury stood in need of prompt medical or surgical attention, irrespective of condition, color, or religious belief.

The inauguration of the Johns Hopkins University took place on Wednesday, February 23d, at the Academy of Music. The auditorium was filled from orchestra to gallery, the entrances and lobbies being blocked by the immense concourse that assembled to witness the imposing exercises. Upon the stage sat the dignitaries from different parts of the United States, prominent among whom were Governor Carroll of Maryland, Mayor Latrobe of Baltimore, Honorable Judge Gilmer, President of the College of Physicians and Surgeons, the trustees of the Johns Hopkins University, the city council, President Eliot of Harvard University, President Cattell of Lafayette, President White of Cornell, President Pownell of Delaware, President Laws of the University of Missouri, President Garnett of St. Johns, President Magill of Swarthmore, President Welling of Columbian, President Hilgard of the American Scientific Association, Professors Dall and Gill of the United States Coast Survey, Professor Abbé of the Signal Service, Professor Eaton of the National Bureau of Education, Professor Marsh of Yale, and many others from the different seats of learning throughout the land. The Philadelphia press was represented by George W. Childs. Among the physicians present were Prof. Alan P. Smith, Prof. W. E. A. Aikin, Dr. James A. Stewart, Health Commissioner, Dr. J. J. Chisholm, Director of the Maryland Eye and Ear Institute, Dr. George Halsted Boyland, Dr. Thomas Opie, and Dr. Lewis H. Steiner. The stage was made to represent a library, the rear being occupied by the Peabody orchestra.

The salutatory was delivered by President Eliot, of Harvard, whose finish oratory and beautiful writing were decidedly the event of the day. President Gilman responded in a lengthy address, explaining the plans to be adopted in the organization of the different departments; it is proposed to follow, to a certain extent, the German university system, borrowing some ideas from the French also. With reference to the sciences of medicine and biology, he thought that it was imperative that some vigorous steps be taken, in consideration of the facts that our provisions for medical instruction cannot compare with those of European universities; that our medical schools have been inadequately endowed; that the system of fees for tuition has led to great abuses; that in some of our very best colleges the degree of doctor of medicine can be won in half the time required for the degree of bachelor of arts; that there is a disposition to treat American diplomas as blank paper by civilians at home and by the professions abroad; that ignorance and quackery vaunting diplomas are prevalent, and that medical degrees conferred by a bogus university are openly sold like patent pills. Then, turning to the other side of the picture, when we see what admirable teachers have given instruction among us in medicine and surgery, what noble hospitals have been erected, what marvelous discoveries in surgery have been made by our countrymen, what ingenious instruments they have contrived, what humane and skillful appliances they have provided on the battle-field, what measures are in progress for advance in hygiene and the promotion of public health; when we see what success has attended recent efforts to reform the system of medical education, we need not fear that the day is far distant. We may rather rejoice that the morning has dawned which shall see endowments for medical science as munificent as those now provided for any branch of learning, and schools as good as those which exist in any other land.

It will doubtless be some time after the opening of the university before the opening of the hospital, and this interval may be spent in forming plans for the department of medicine. President Gilman urges the importance of instruction antecedent to the study of medicine; such instruction is avoided by students ordinarily, as a glance at the catalogue will prove. He advocates a course similar to that begun at the Sheffield School, New Haven, but more extended. Such a course should include abundant practice in the laboratories of chemistry, zoölogy, and physics; the study of anatomy, physiology, and palæontology, and of the lower forms of life; the investigation of the principles of drainage and ventilation, and of climatic or meteorological laws; the geography of diseases, with the remedial agencies of nature.

Indeed, President Gilman does not insist too strongly on a scientific training preparatory to the study of medicine. He advocates such facilities as are now afforded, for instance, by Huxley in London, Rolleston at Oxford, Foster at Cambridge, Leukart, Kolbe, and His at Leipzig, Hoffmann and Reichert at Berlin.

It is proposed to make the medical department independent of students' fees, thus avoiding the temptation to bestow diplomas upon unworthy candidates. The fund is ample for this, nearly eight millions being bequeathed, to be distributed as follows; \$3,500,000 for the university, \$3,500,000 for the hospital, and the balance to local institutions of education and charity.

BALTIMORE, *February 25, 1876.*

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING MARCH 4, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	651	32
Philadelphia	800,000	362	23
Brooklyn	500,000	261	27
Boston	342,000	197	30
Providence	100,700	30	15
Worcester	50,000	9	9
Lowell	50,000	14	15
Cambridge	48,000	24	26
Fall River	45,000	20	23
Lawrence	35,000	18	27
Lynn	33,000		
Springfield	31,000	8	13
Salem	26,000	13	26

Normal Death-Rate, 17 per 1000.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held on Monday evening, March 20th, at eight o'clock, at the hall in Temple Place. Reader, Dr. J. O. Green; Subject, Case of Abscess of the Brain.

WILL the writer of the anonymous communication signed "A." please send us his name as a guarantee of his good faith? — EDS.

BOOKS AND PAMPHLETS RECEIVED. — Report of the Health Officer of the City of Oakland for 1875. George E. Sherman, M. D.

Report of the Board of Managers and Superintendent of the State Lunatic Asylum of Texas for 1875.

Annual Report of the Directors and Medical Board of St. Michael's Hospital, Newark, New Jersey.

Transactions of the Colorado Territorial Medical Society at its Third and Fourth Annual Sessions. Denver, 1876.

Outline Drawings of the Figure for Recording the Situation and Form of Cases of Skin Disease, and for Noting their Progressive Changes under Treatment. Arranged by Balmano Squire, M. B. Lond. London: J. and A. Churchill. 1876.

MESSRS. EDITORS, — In reviewing the clinical report of cases at the Massachusetts General Hospital, printed in your issue of February 24th, a query arises in my mind concerning which I desire information. Please do not think I am criticising, and if possible do not regard my question as puerile.

In the case of "depressed fracture of the skull," it is stated that "one of the fragments of the inner table had made a minute puncture in the dura mater, through which there was a slight oozing of a clear fluid." Taking this in connection with the possibility of a like injury to the pia mater, with the "vomiting and restlessness . . . during the first four days after the operation," and with the special symptoms manifested on the third, fourth, and fifth days, were any hints offered thereby pointing to a free opening for the escape of those morbid fluids which subsequently showed themselves? Of course the light shed by post-mortem examinations is good in some cases, but one would prefer a light more available for the welfare of his living patient when possible, and therefore I ask for information to guide me in a similar case, if I have the fortune to be called to one. Does not the history of such instances suggest that free drainage is the only safe method to avoid both the formation and the accumulation of pus?

DULCAMARA.

March 2, 1876.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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SCHOOL-CHILDREN AND DANGEROUS COMMUNICABLE DISEASES.¹

BY ARTHUR H. NICHOLS, M. D.

THE reorganization of the school committee of the city of Boston, which has just been carried into effect, renders it an opportune time to direct attention to the expediency of adopting some restrictive regulations tending to check the spread of dangerous infectious diseases among school-children. While the utility of rules designed to deal preventively with this class of affections is clearly demonstrated by writers upon school hygiene, and the absence of such regulations is often deprecated by the more intelligent teachers and parents, it remains, nevertheless, a singular fact, that in the public schools of Boston, and indeed throughout the State, there exists no rule which would sustain the teacher in excluding a pupil who should insist upon attending school from an infected home. To this absence of any regulations designed to check the reckless dissemination of infecting matter, is attributable the fact that the school-houses, especially in large cities, constitute in many instances the principal foci of contagion.

It is stated, for instance, by William Squire, M. D., who investigated the frequent cases of scarlet fever occurring in a section of London in 1874, that by far the greatest number of outbreaks was directly traceable to schools, from which the children carried infection to their homes with serious and fatal consequences.

In a few localities, attempts have indeed been made to interrupt intercourse between infected houses and the school-room, by leaving the matter to the decision of the family physician; but in such cases the conflicting theories advanced by different medical men have often served to embarrass and bewilder the solicitous instructor, without being equally efficient in affording protection to the pupils.

As an instance of the danger to which schools may be exposed, owing to the culpable ignorance of certain practitioners, reference may be made to a fallacy, peculiar, I believe, to physicians of the so-called new school, the notion, namely, that there exists a modified form of scarlet

¹ Read before the Norfolk District Medical Society, January 11, 1876.

fever, analogous to varioloid, and not requiring to be dealt with as a dangerous communicable disease. And it is not many years ago that the non-contagiousness of scarlet fever was openly maintained by a prominent physician of this city. The mere possibility that the welfare of an entire school may be imperiled by the existence of delusions of this nature indicates the urgent necessity for the establishment of definite, fixed rules for the guidance of the teacher.

To consider, then, the character of the danger to which children are exposed within the schools, it may be briefly stated that scarlet fever and small-pox comprise the most serious and fatal maladies to which the pupils are subjected. Of these, scarlet fever is the more frequently encountered, and the one to be especially dreaded; for it destroys by far the greater number of children, besides inflicting serious and permanent injury upon many who survive its attack. The comparatively slight degree to which this disease is amenable to medical treatment, our inability to check or to modify its ravages, in the sense that small-pox is prevented or modified by vaccination, and the indefinite period for which the germs of the disease retain the power of infection serve to render the malady extremely formidable. In Boston, scarlet fever may be said to be uniformly present. It has destroyed during the period of the last twenty-six years above five thousand lives, this excessive mortality from this source being ascribed, by Dr. T. B. Curtis, to the "unrestrained dissemination of contagia." That prophylactic measures should be taken, with the object of correcting the ignorance and carelessness which exists in the community with respect to this destructive malady, will be generally admitted, and surely no better point of departure can be found in this work of reform than our school-houses.

The public, and especially parents, should be warned that it is incumbent upon them, in case of the occurrence of this disease, to resort to all reasonable means for the protection of the healthy. Chief among these precautions is the prompt and complete isolation of the sick, and if circumstances do not permit this in the patient's own home, he ought to be treated in hospital. With regard to small-pox, on the other hand, the very great immunity, or protection, afforded by vaccination renders the danger from contagion small, if we except, perhaps, those rare intervals when this disease prevails as an epidemic, and seems to assume a character of unusual virulence and contagiousness.

Now, in attempting to frame regulations with the object of intercepting communication between infected tenements and the school, it is important to recognize at the outset the tendency upon the part of the lower classes to conceal the existence of these two diseases, and their inclination, also, to oppose vaccination. As an evidence of this disposition to conceal the existence of small-pox, it is reported that

during the past year, out of one hundred and fifty-eight fatal cases occurring in New York, no less than sixty were dead when discovered.

The chief inspector of the vaccinating corps of the same city states, in his report to the board of health, that great difficulty was experienced in the work of his department, on account of the opposition of the parents, the result of which was that but ten to fifteen per cent. of the children requiring vaccination were really vaccinated. "Strange as it may seem," he adds, "we find instances nearly every day where the parents of school-children living in infected houses, and even when small-pox is in their own families, persist in sending them to school, if they be allowed, and yet will not consent to their being vaccinated under any circumstances." This opposition upon the part of parents to vaccination, whether it be the result of vague and ignorant prejudices, or attributable to what has been termed a mere *vis inertiae*, must be met and overcome by improved statutory enactments, and educational influences, before we can hope to intercept all the channels through which the germs of contagious diseases find their way to the school-room.

Considering, however, that it is the imperative duty of the school authorities to adopt the most stringent measures, designed to interpose a check to the unlimited spread of these diseases, I would venture to suggest some such rules as the following, as best calculated to meet the end proposed:—

I. No pupil shall be allowed to attend school from any house in which small-pox, varioloid, or scarlet fever is prevalent.

II. A pupil who has been affected with small-pox, varioloid, measles, or scarlet fever shall not be permitted to return to school until, desquamation having ceased and convalescence being complete, the surface of the body shall have been finally disinfected by means of warm baths (with abundant soap), applied upon four successive days, or until no trace of roughness of the skin remains. The pupil, furthermore, shall not be allowed to reënter school until the teacher shall have received satisfactory evidence that all clothing worn by the patient has been thoroughly disinfected, and that the sick-room and its contents have been properly cleansed. If the teacher is not satisfied that all practicable disinfection has been effected in the case of any pupil, said pupil shall not be readmitted until three weeks shall have elapsed from the beginning of convalescence.

III. No pupil shall be allowed to attend school who is affected with diphtheria or whooping-cough.

Both parents and instructors should be informed as to the measures requisite for the disinfection of the clothing, sick chamber, etc.¹ They should also be made to appreciate that a neglect of these precautions,

¹ See *Manual of Public Health* edited by Ernest Hart, page 266.

when children are allowed to return to school after slight cases, forms often a principal source of epidemic infection.

It is hardly necessary to add that under the supervision of a qualified medical inspector, to whom all obscure or doubtful points might be referred, a much more intelligent and judicious enforcement of these rules might be expected.

It does not appear important or desirable that any school-regulations should take cognizance of other contagious diseases to which children are liable. It would be hardly possible, for instance, that the contagion of cholera or typhoid fever should be conveyed within the school-house, the quality of infectiousness of these diseases being confined, as is commonly believed, to the dejecta of the patient. There is indeed room for a difference of opinion as to whether it is worth while to include in the above category diphtheria, measles, or whooping-cough. Patients under the influence of diphtheria are not generally thought to evolve the poison from the body, as in scarlatina; nor is this disease believed to be communicable by means of infected air or clothing. As regards measles and whooping-cough, the direct mortality from these diseases is commonly quite small, and they are therefore to be dreaded only as they predispose to certain lung diseases, especially bronchitis and pneumonia.¹ In view, moreover, of the popular notion that children must contract these diseases once in the course of their lives, and that it is therefore better for them to take them at an early period and thus insure immunity thenceforth, it is not difficult to understand that many parents would hardly acquiesce in any stringent rules, the utility of which could not always be demonstrated to them.

There are other and less serious contagious diseases communicated within the school-room, attributable for the most part to the presence of animal or vegetable parasites, with the general characteristics of which the instructor would do well to familiarize himself; but as they do not endanger life, they cannot properly be discussed in this connection.

In conclusion, it may be safely alleged that in Boston, as well as in other large cities, an undue mortality occurs among school-children from the effects of contagious diseases, contracted to a great extent within the school-room, and that this undue mortality may be reduced by the adoption and enforcement of appropriate prophylactic measures.

It is indeed true that there exists in all our large cities a certain foreign element in the population, with which it would be impossible to carry out to any great extent the regulations above suggested, or indeed any similar rules. But this fact cannot be urged as presenting any

¹ The direct mortality from measles is not always small. Thus in Fiji, during a recent epidemic, the rate of mortality reached forty per cent. The same rate of mortality was also observed in Paris in the month of January, 1871, among the *garde mobile* forming part of the garrison.

weighty objection against the adoption of stringent prophylactic measures which surely could be enforced among the more intelligent portion of the community. If a large proportion of all murderers escape the penalty imposed for their crimes, it will hardly be maintained that for that reason the laws for the punishment of murder should be repealed. Upon the other hand, the epidemic may be so virulent and extensive as to render all regulations inoperative, or of no avail, and under these circumstances, as a *dernier ressort*, the schools should be temporarily closed. I have often been impressed with the prompt and decided measures taken by the proprietors of some of our popular sea-side hotels, to guard against the entrance of any guest supposed to be suffering from an infectious disease; and in cases where a communicable disorder has broken out, I have observed that they are equally strenuous in advocating speedy removal from the house; or if removal is impracticable, they do not fail to insist upon the importance of complete isolation and disinfection. Their profits for the year are endangered, if a communicable disorder is known to exist in the house. So, too, at the neighboring market at Brighton, the cattle-owners have likewise found it to their pecuniary advantage to adopt stringent rules to prevent the spread of certain contagious diseases among the animals. Is it then, unreasonable to demand of our school authorities the adoption and enforcement of similar sanitary regulations, with the view of promoting the physical integrity and welfare of the school-children?

ANALYSIS OF FIVE THOUSAND CASES OF SKIN DISEASE.¹

BY JAMES C. WHITE, M. D.,

Professor of Dermatology in Harvard University.

THIRD PAPER.

THE dermatitides form a separate group of the acute exudative diseases in Hebra's scheme, and are subdivided by him into the idiopathic and symptomatic. The first comprises the varieties traumatica, venenata, and calorica; the latter, erythematosa and phlegmonosa. Under the head of dermatitis venenata, I have placed those inflammatory affections of the skin which are produced by the action of certain vegetable and animal poisons when brought into more or less intimate contact with it. They include fifty-three cases of mosquito poisoning and twenty of rhus poisoning. They will be spoken of here that there may be no deviation from the plan of arrangement according to Hebra proposed in the beginning, even if, as in this case, the affections are regarded by the writer as misplaced. Dermatitis is a very general term, and

¹ Continued from page 177.

might, with the latitude of signification here given it by Hebra, be as appropriately applied to many of the diseases of this class, to herpes or acute eczema, for instance, to the latter of which the changes in the tissues of the skin produced by contact with rhus properly belong.

The cases of mosquito poisoning, so called, cannot be so closely defined as to admit of a narrow classification upon the basis of pathological anatomy, for they vary greatly in their cutaneous manifestations. They represent the effects of the insertion of a peculiar poison into the skin of persons previously unused to it. In volume lxxxv., No. 19, of the *JOURNAL*, there was published by the writer a paper on *The Protection acquired by the Human Skin and other Tissues against the Action of certain Animal Poisons after Repeated Inoculation*; in that paper the appearances caused by mosquito poison were described in an account of a series of cases observed at that time. As those cases formed a part of the fifty-three above mentioned, and are strongly typical, I cannot do better than repeat here the description of them there given.

On the 28th of August, 1871, a family consisting of parents and four children, the latter between six and eighteen years of age, came to the skin-department for advice. The father and mother presented upon their faces, necks, forearms, and hands a very abundant outbreak of large and small papules, more or less prominent and mostly excoriated, among which were a few wheals and large vesicles. In the children, in addition to these forms of efflorescence, the whole skin of these parts was in an erythematous condition, and in the older two there were numerous pustular and furuncular, almost ecchymatous lesions. It was in the youngest two children, however, that the climax of the disturbance was developed; for upon them the process of free exudation was carried to its extreme limit in the form of very large bullæ, which were so generally distributed upon the regions above named as to give a predominant character to the whole efflorescence, and constitute an apparent pemphigus of extreme grade. Some of these blebs upon the arm of the boy were more than three inches long, and contained more than half an ounce of fluid. No better illustrations of the progressive passage of one form of well-defined efflorescence into another, from erythematous spot, through papule, vesicle, pustule, to furuncle, or from wheal to bleb, and of the insufficient basis their halting stages alone afford for the establishment of distinct titles in nosology, could be desired. Yet this great diversity of appearances, embracing nearly every form of acute cutaneous lesion recognized, was produced by one and the same exciting cause in all the cases, namely, the bites of mosquitoes. The differences presented by the various individuals of the family were such as are consistent with the well-known greater tendency to exudation in inflammatory processes of the skin in childhood than in the same affections in adult life. The subjective symptoms in all were only slight itching, and

the soreness necessarily consequent upon the gravity of the lesions. There was no constitutional disturbance.

How, now, shall we explain the serious and unusual effects of so simple and common a disturbing cause as mosquito bites in this instance? Similar manifestations, and of as varied a type, although of much milder degree, I have often seen in individual cases before; but the fact of six persons of one family simultaneously exhibiting such extraordinary results shows the existence of some unusual element in the case. That element I believe to have been a want of protection against the poison of these insects through prior inoculation. The family, leaving their home in England, had arrived in Boston well and clean two weeks previous to my seeing them, and had spent that interval in lodgings in a street at the North End, where there were many mosquitoes, insects they had never seen before. Although the appearances were confined to parts exposed to their bites, they were quite unsuspecting of the cause of trouble.

Since the occurrence of the above, I have seen every summer and autumn many cases almost identical with them in character, although none more severe, so that I am confirmed in the correctness of the conclusions then offered. Even in the winter, in a single instance, I ventured to say, on seeing a patient for the first time, "Were the season summer, I should say that this was a case of mosquito poisoning in a freshly-arrived immigrant." On inquiry it was ascertained that the patient had but just landed, and had found shelter in a hot, under-ground dwelling, where mosquitoes were actually passing the winter in great quantities and undiminished activity. So characteristic are the appearances of these cases in spite of the great diversity of their cutaneous lesions. It is this diversity, however, which warrants the use of the general title *dermatitis* for them.

In *rhus* poisoning, on the contrary, we have neither diversity of efflorescence nor severity of inflammation enough to warrant the application of this name to the appearances of the skin. They are those simply of ordinary acute *eczema*, with just enough individuality in the majority of cases to suggest to the educated eye their peculiar and artificial nature. That the inflammation of the skin provoked by this poison may in rare instances exceed in depth and intensity that which belongs to *eczema* in its whole possible range I do not deny, but I have never seen such. An account of the nature of the poison, and a description of the cutaneous manifestations produced by it, may be found in the *New York Medical Journal*, March, 1873.¹ In that article reference was made to the preparation of the celebrated Japanese varnish, which is made from a closely allied species of *rhus*, and to its effects upon workmen while using it. I have just received, through the kindness of Dr. Hodges, of this city,

¹ On the Action of *Rhus Toxicodendron* and *Rhus Vencinata* upon the Human Skin.

the following additional and interesting information concerning the effects of this varnish upon persons in China, which was communicated to him by Dr. A. P. Chamberlain. This gentleman spent two years in that country, and left it partly on account of the frequency and severity with which he was poisoned there. The juice of the tree is obtained by tapping, and the boys who collect it are said to die sometimes from its effects. The first time Dr. Chamberlain ever saw the varnish applied was on a rainy day, and remarking on the oddity of painting a porch of a house in such weather, he was told by the Chinese workmen that the varnish dried better in the dark and wet, and that this was one of its several "devilish" characteristics. It is only in its fresh state, Dr. Chamberlain says, that the lacquer poisons; when once dried it is inactive. He was poisoned once by unlocking a door, where an old keyhole had been stopped by putty mixed with the lacquer; once by opening a freshly-painted window for a lady; once by walking up the Hong Kong Club stairs on some pieces of board laid down temporarily on the freshly-painted stairs; once, as he believes, by passing two freshly-painted coffins in the street. At one time, while he was there, a ship, which had come down the river with some of the paint on board, took fire at the wharf. To save her cargo, it was hastily tumbled out, and one of the jars got broken. Its emanations so poisoned some of the sailors that they had to be taken to the hospital. In one of his attacks Dr. Chamberlain employed a Chinese physician. His treatment was a "whitewash" made of extract of garlic and plaster of Paris. It had no special efficacy.

The cases which occurred at the hospital were mostly among workmen who had handled the vines of *rhus toxicodendron* while working in gardens and about stone walls, and among children after occasional visits to the country and woods. They were mostly of mild type, and would more properly have been placed with other cases of artificial eczema.¹ Several cases of other affections of the skin, — eczema, acne, etc., — it may be mentioned in this connection, have also been observed at the hospital, in which poisoning by ivy was referred to by the patients as the cause and starting-point of the later affection, a belief, as stated in the article referred to, of quite common prevalence in all classes of society, and well founded only so far as consistent with the possibility that such secondary affections may be indirectly due to the morbid impression left upon the cutaneous tissues by the severity of the original process.

Dermatitis calorica includes seven cases of burns, seven of chilblains, and twelve of folliculitis (so called). The first two, caused by extremes of temperature, presented nothing of interest; about the last a word of explanation is due. As above stated, the term, as here used, means in-

¹ During the past winter cases of *rhus* poisoning have been of frequent occurrence in this vicinity, as many as ten or twelve within the writer's knowledge. They were nearly all caused by cutting sticks from *rhus venenata* while on skating parties.

flammation of the skin surrounding the sweat glands, as the result of their over-activity (hyperidrosis) in hot weather. Beginning as simple hyperæmia or congestion of the capillary plexus which envelops the glands, the process advances under prolonged stimulation, assisted no doubt by the itching it excites, to well-marked inflammation of the cutaneous tissues immediately surrounding the glands. The surface of the skin presents at first the appearance of fine red dots, which rapidly become well-developed papules. In other words, we have established "prickly heat," or the sudamina of Hebra, which may go on under further provocation to eczema of any grade, or develop into the more advanced form of dermatitis phlegmonosa or furuncular inflammation. Many of the cases of eczema and of furunculosis of infants and workingmen, occurring especially in hot weather, were of this origin.

Dermatitis erythematos. — Of the eighty-six cases in this group, fifty-two were ordinary erysipelas, and thirty-four true inflammation of the dermal tissues, not distinctly erysipelatous, and produced by a great variety of causes. In many of them the eventual nature of the process was not definitely ascertained, as they were not sufficiently long under observation. The cases of erysipelas were mostly of a mild, self-limited type, and their traumatic origin was generally made out.

Dermatitis phlegmonosa. — This group of the more deeply-seated and destructive inflammations of the skin was represented by six cases of cutaneous abscess and sixty-five of furunculosis. The ætiological relations of the latter were very diverse.

There were one hundred and one cases of herpes, including twenty-two of herpes labialis, three of herpes præputialis, and seventy-six of herpes zoster. Many of the cases of labialis were relapsing in character, and their reflex origin could be directly traced to irritation about the anus or vagina. An analysis of the cases of zoster is presented in the following table, the anatomical divisions being those given in Professor Hebra's work.

	Men.	Women.	Children.	Total.	Right.	Left.
<i>Zoster capillitii</i>	3	1	—	4	3	1
<i>Zoster faciei</i>	—	—	3	3	2	1
<i>Zoster nuchæ</i>	3	1	3	7	5	2
<i>Zoster brachialis</i>	2	1	6	9	5	4
<i>Zoster pectoralis</i>	12	10	16	38	17	21
<i>Zoster abdominalis</i>	2	2	5	9	2	7
<i>Zoster femoralis</i>	3	—	3	6	3	3
	25	15	36	76	37	39

In only twenty of the cases was neuralgic pain a prominent symptom at any stage. It was most marked and persistent in old people, and occurred most frequently in the thoracic and abdominal forms. In none

of the frontal cases was the eye seriously affected. Nothing was learned by special inquiry in every case that threw light upon the ætiology of the affection.

The cases of pemphigus, fifteen in number, exhibited nothing of especial interest. A large proportion of them were in infants.

Psoriasis occurred one hundred and fifty-two times. The cases were in no way remarkable. In a great majority of them the patients were perfectly healthy in every other way, so far as could be ascertained, and in only a small percentage of them was any hereditary tendency to be traced.

Eczema formed nearly one half of the whole number of cases upon the list, two thousand two hundred and forty-two, and if to these were added the cases of rhus poisoning and a part of those of impetigo and ecthyma, as might appropriately be done, this proportion would be still greater. This percentage is extraordinary, even when considered in view of the widely open definition given to the term by the writer, including as it does several of the forms of lichen, strophulus, pityriasis, and impetigo of some dermatologists, especially those of the English school, as mere stages or varieties in form of one general inflammatory process of the skin, which cannot consistently be separated. But in the statistics drawn from similar sources by Dr. Anderson, of Glasgow, who alone among English writers on dermatology adopts this same broad definition of the German school, eczema occurred only two thousand five hundred and twenty-seven times in ten thousand consecutive cases. Certainly in private practice it does not approach this frequency of occurrence. This latter difference is, in some measure at least, due to the absence in great degree among the better classes of certain extraneous exciting causes of the disease, such as the presence of pediculi, improper care of the skin, contact with irritating matters in daily occupation, etc., but it is impossible to explain this great disparity between the figures of the Glasgow statistics and our own, which include the same classes of society. I shall not attempt to divide the cases according to the well recognized and defined varieties founded on surface appearances, such as eczema papulosum, vesiculosum, pustulosum, squamosum, and the like, nor into acute and chronic forms, partly because a large proportion of them presented several of the former varieties or stages at the same time upon different parts of the body, or at successive periods, and were equally mixed in course; and also because the cases were not as a whole sufficiently under control or long enough under observation to make such an analysis reliable, even if it were practicable. With regard to the ætiology of the affection, an analysis of the cases may, perhaps, afford more valuable information. The following table will show, for example, the comparative prevalence of the disease in the two sexes at various periods of life:—

Ages.	Males.	Females.	Total.
Under 1 year.....	157	112	269
Between 1 and 5.....	236	261	497
“ 5 “ 10.....	74	125	199
“ 10 “ 15.....	39	75	114
“ 15 “ 20.....	42	52	94
“ 20 “ 30.....	134	129	263
“ 30 “ 40.....	139	110	249
“ 40 “ 50.....	122	129	251
“ 50 “ 60.....	91	83	174
“ 60 “ 70.....	55	55	110
“ 70 “ 80.....	14	8	22
	1103	1139	2242

It will be seen that eczema occurs oftener in the first than in any subsequent year of life, and that starting with seven hundred and sixty-six cases in the first five years, its frequency diminishes in the subsequent periods of equal length up to the twentieth year, when it begins to increase. The same result is more strongly developed if its comparative prevalence is expressed by decades; thus in the first decade the table presents nine hundred and sixty-five cases, in the second two hundred and eight, in the third two hundred and sixty-three, and so on. This excessive prevalence of the disease in earliest childhood, and especially in the first year of life, must be owing, in some measure, to the very tender condition of the cutaneous tissues at this period and to the improper care it receives among the classes here represented, although this will account but for the smaller proportion of the cases, I think. It would be, perhaps, impossible to make a comparative estimate of the occurrence of infantile eczema of this class and that of other classes of society, because the latter is seldom seen by the specialist, but is treated by the family physician.

In a great majority of cases the cause of the disease could not be discovered. Some of the patients were poorly fed, weak, and anæmic, or sick in other ways, but such were the exception, and certainly three fourths of them were well nourished and in good condition in every way otherwise, except for the effects upon the health due to the eczema itself. Like all other infants, those with eczema were “teething.” The disease, and this may be said of adults as well, was not found to be prominently associated with, far less dependent upon, any special disorder of digestion, errors of diet, rheumatic diathesis, blood change, perverted innervation, hereditary influences, or others of the many recently assumed causes of its production. As he recently stated in the *JOURNAL*,¹ the writer would not deny that there are often in patients with eczema faults of the general economy, or disorders of special organs and functions, but that they are generally or necessarily present, or that

¹ December 2, 1875.

when present they can be demonstrated in most cases to be the cause of the disease, cannot be accepted except upon some show of legitimate evidence. His observations of these cases, as well as of those in private practice, confirm him in the conclusions there expressed, that the causes of eczema are almost wholly unknown, not yet within the range of demonstrative reasoning, in which respect it is like most diseases of the skin, like most diseases in general.

As exceptions to this confession of ignorance are to be regarded the cases of artificial or extraneous origin, of which, as will be seen, not a few were observed. The action of irritants in exciting eczema has been alluded to above in connection with some of the cases of dermatitis calorigica and venenata. Of the influence of heat in this direction there were fifty examples, which occurred during periods of excessive solar heat, and mainly in young infants and laboring men. Beginning, many of them, as the folliculitis there described, the inflammation extended to the surrounding cutaneous tissues in the form of acute eczema, and was often accompanied by painful furunculosis. The direct application to the skin of the following substances gave rise to acute eczema: arnica,¹ one case; sulphur in lard, two; blister, one; cantharides wash, one; mustard bath, one; tincture of balm of Gilead buds, one; salt pork slices, two; cyanide of potassium, one; alkalies, two; mercurial ointment, two; croton-oil, one; poultices, four; liniments (nature unknown), twelve. In certain occupations the hands were affected from contact with similar substances, as follows: currier, one case; washerwomen, two; bartender, one; sugar workers, two; soap maker, one; bakers, seven; printers, two; burnishers, three; polishers, two; dye-house man, one. The most frequent cause of artificial eczema, however, was the irritating presence of lice. Of such cases there were two hundred and seventeen recorded, but there were doubtless others. They were mostly eczema of the scalp and adjoining parts. A few of them were caused by clothes lice. In not a few instances the local origin of the eczema, although not of an extraneous nature, could be made out. Upon the lower legs it could be referred, in many cases, to disturbance in the circulation produced by varicose veins. Here it was mostly of a chronic type. It followed vaccination, beginning about the seat of inoculation in eight instances, and was the result, not of any impurity of virus or direct transference from another person, but of the disturbance of the whole cutaneous tissues in a patient disposed to the disease. The same effect is often produced by measles and other exanthemata, a more or less general eczema immediately following their disappearance in consequence of the excitement of the skin they give rise to. Several instances of this kind were observed. In a few cases eczema was directly caused by the irritating character of discharges from the ears and nostrils in affec-

¹ See JOURNAL, January 21, 1875.

tions of these passages, and in a few others, in which the skin surrounding the mouth and nostrils was affected, it was sympathetic with irritation about the genital or anal regions. In a great many cases the disease was of secondary origin, and was scratched into existence in the course of other affections of which pruritus was a marked symptom.

The sexes were about equally represented in the table, and were quite uniformly so at all ages, excepting the period from five to fifteen years, in which the number of girls affected was twice that of the boys. It is possible that this apparent inequality may be explained by the fact that boys of this age are far less tractable than girls, and therefore are not so easily induced to come to the hospital for treatment.

It would not be worth while to attempt to subdivide the cases into as many varieties, according to regional distribution, as are given in many works, because any single limited district is so seldom alone affected, except in the cases of local origin as above given. In specifying the distribution of the disease, therefore, I shall refer only to the general divisions of the body, and it will be understood that only portions of these were in the great majority of cases implicated in any individual case. Eczema affected the head, including the neck, in one thousand one hundred and sixty-seven cases; the trunk in two hundred and twenty; the arms in one hundred and seventy-five; the hands in two hundred and eighty-five; the legs in four hundred and sixty-three; the feet in forty; the genital and anal regions in ninety-three; and the whole body in seventy-three cases. The head and neck are here considered one region because eczema of the latter is generally associated with that of the face and scalp. The hands, as will be seen, suffered much more frequently than the arms, partly, no doubt, on account of their greater exposure to fluctuations of temperature and moisture, to contact with irritating substances, and to the pressure, friction, and strains to which they are so generally liable. So, too, eczema of the genital and anal regions is combined, because the former is so frequently the starting point of the latter. The cases of general or universal eczema were mostly infantile.

Scabies occurred only one hundred and thirty-nine times. The fluctuations in the prevalence of this disease during the past twenty years have been remarkable. In the early part of this century, if report be true, it was quite a common affection in many parts of New England, and was one of the evils to be especially guarded against at public schools, as lice are now. Later, it died out so largely that physicians were generally unacquainted with its appearances, and often failed to recognize it, the disease appearing only at intervals in any community, and being kept up apparently through fresh importation by immigrants. During the war of the rebellion, however, it found the most favorable conditions for development in the camp life of our soldiery, and soon

became a universal and serious endemic in the armies. But so little familiar were our military surgeons with scabies that it was regarded as some peculiar form of the disease, and was called army itch. It was not confined to the camps, however, but was carried to their homes all over the land by returning soldiers of all ranks, and imparted to the household. In this way all classes of society became affected, and the disease once more became familiar to physicians. After the war ended it very slowly subsided, until in the past few years it has again become, in New England at least, as rare an affection as it was twenty years ago. This is strikingly shown by a comparison of its yearly occurrence since the skin-department was opened. In 1869, its first year, there were eighteen cases among the one hundred and nine patients; in 1875 but eight cases were observed in one thousand and seventy-three patients, and among the two thousand and twenty-seven patients of the last two years it occurred but twenty-five times. It is becoming, in fact, a difficult matter to properly illustrate the disease to classes, and were it not for its occasional importation through foreign immigration, it might become obsolete here. If we compare now the prevalence of the disease amongst us and in European countries we shall find a most marked difference. In the Vienna skin clinic six hundred and seventy cases were treated in 1871, and of Dr. Anderson's ten thousand consecutive cases of skin disease in the Glasgow hospital, two thousand five hundred and twenty-seven were scabies; whereas among more than ten thousand similar cases in our two Boston hospitals, it occurred only two hundred and fifty-three times. Such difference can be accounted for only by the more cleanly manners of all our classes. With such abundant foreign sources of supply to colonize from, *sarcoptes hominis* will scarcely become extinct in our day.

(To be concluded.)

RECENT PROGRESS IN THERAPEUTICS.¹

BY ROBERT AMORY, M. D.

Hypodermic Injection of Hot Water for the Relief of Pain. — Dr. Griffith² accidentally discovered that the hypodermic injection of hot water following an injection of a small dose of morphine would relieve pain. He gave these injections to several patients who had been in the habit of taking morphine, and the procedure resulted in "the great improvement of their health and the weaning them from the baneful poison." When this plan failed he would inject a small dose of morphine first, and follow that up with the use of hot water in two, three, or four hours. For the cure of sciatica and deep-seated pain, he found the hot-

¹ Concluded from page 305.

² British Medical Journal, December 4, 1875.

water injections most beneficial. In some instances "he pushed the needle up to its very end into the tissues, and forced in the water amongst the muscles, and then withdrew the instrument immediately afterwards, placing the tip of the finger on the perforation point, and, by a rolling movement, dispersing the fluid in its bed." He frequently has cut short acute attacks of lumbago, sciatica, and the pain resulting from a sudden strain or fall.

Salicylic Acid. — This substance, which formerly was obtained from wintergreen, has recently and at a comparatively small cost been separated from phenol by a process devised by Kolbe,¹ who determined its physiological action also. "Given in large doses, six grammes in two days" (92.76 grains), "salicylic acid produces ringing in the ears, and passes out in the urine, partly as salicyluric acid, partly unchanged; it may also be detected in two hours, and even after twenty hours, in urine, although the dose may be only 0.3 gramme (about five grains). Owing to the fact that it is easily decomposed into phenol and carbonic anhydride, it acts antiseptically, preventing fermentation and decomposition."² Its presence in the urine may be detected by chloride of iron and the precipitation of iron by phosphoric acid, which shows a violet reaction. It seems to arrest or interfere with the action of fermentation and the decomposition of the organic ferments. Although, outside of the body, the admixture of a one per cent. solution of salicylic acid may arrest the action of ptyaline on starch, and interfere with the digestive action of pepsin,³ Kolbe observed in his experiments that the ingestion of fifteen or twenty grains was not followed by symptoms of dyspepsia.

At the Berlin Medical Society,⁴ after the reading of a paper by Senator on the Antifebrile Action of Salicylic Acid, a good deal of discussion ensued upon the mode of administration, most of the speakers considering the forms of powder or emulsion undesirable, while the quantity of water required, on account of the great insolubility of the acid, was also objectionable. Glycerine was generally recommended, and it was stated that fifty parts of this and fifty of water constituted a vehicle that held the acid in permanent solution.⁵ Salicylic acid is easily soluble in ten parts of cold alcohol; if water is added to this alcoholic solution, the salicylic acid will fall down in the form of a milky-white, fine precipitate; but if a small quantity of glycerine (equal in amount to the alcoholic solution) first be added, water may then be superadded without any separation of solid matter. In this form, the author of this report has administered the medicine to a child fourteen months old, who had secondary diphtheria as a complication of measles. A solution con-

¹ Journal für praktische Chemie, x. 89, 1875.

² Watts's Dictionary of Chemistry, 1875.

³ Miller, Philadelphia Medical Times, 1875, 377.

⁴ Berliner klinische Wochenschrift, August 16, 1875.

⁵ Medical Times and Gazette, September 18, 1875.

taining half a grain was administered every three hours, and was followed in twelve hours by the entire disappearance of the false membrane, and a reduction of the temperature two and a half degrees F. Apparently no irritation of the intestinal tract followed its use, though the use of the medicine was continued for three days, and gradually discontinued. Amelioration of very bad symptoms of the disease continued. No other medicinal agent was used. One very offensive, liquid fæcal dejection occurred twenty-four hours after the first dose was given, but subsequently the discharges became natural.

Paul Fürbringer¹ observed that this drug produced no change of temperature in ten rabbits (one-centigramme doses), and in six men, (twenty-five centigramme doses), all of whom were in good health. In the septic fever produced by the inoculation of putrid liquid he noted the range of fever until it disappeared. Some days later, when the animals had recovered, he repeated the inoculation and administered the salicylic acid; this was followed by a diminution in the fever, commencing from two to six hours after the first dose. In the treatment of fever associated with phlegmasia, the results of the administration of salicylic acid were negative; whilst, on the other hand, in fever depending upon suppuration a notable defervescence followed the ingestion of this substance.

On account of its imputed property of preventing the development of ferments, K. Fontheim² employed salicylic acid in those diseases which are characterized by a morbid development of inferior organisms, especially in diphtheria. Until the close of October, 1875, he used in this latter disease the local application of sponges soaked in alum or carbolic acid, with the result of five deaths out of a total number of one hundred and seven cases of diphtheria; the most obstinate of these cases lasted from nine to fifteen days, and the most favorable from three to seven days. Since last October he has used topical applications of salicylic acid instead of carbolic acid; of the thirty-two cases of diphtheria treated in this way, the most severe lasted eight days, and the most favorable only three days. He concludes that the salicylic-acid treatment cut short the disease. The strength of his solution was two parts of salicylic acid dissolved in sufficient alcohol, and two hundred parts of water then added. The use of this solution as a gargle was a successful prophylactic against diphtheria to those exposed to contagion.³

The experience of Wagner⁴ points to the same conclusion, and he

¹ Untersuchungen über antifebrile Wirkung der Salicylsäure, in Sonderheit über die temperaturherabsetzende Kraft bei septischen Fieber; and *Revue des Sciences médicales*, July 15, 1875.

² *Journal für praktische Chemie*, xi. 211, 1875.

³ See also the *JOURNAL*, February 10, 1876, page 151.

⁴ *Praktische Beobachtungen über die Wirkung der Salicylsäure*, in the *Journal für praktische Chemie*, ii. 57.

states, moreover, that for the purpose of disinfecting the contents of the stomach and intestines it is far superior to other agents; for none of the latter can be prescribed in such large doses. But, on the other hand, Schüler concludes, from his experience in a limited number of cases treated respectively by carbolic acid and salicylic acid, that the former substance is more successful than the latter in the cure of diphtheria.¹ Zürn² administered one gramme of salicylic acid to dogs every day for several days, giving the last dose just before they were killed, and observed, post mortem, no inflammation of the intestinal mucous membrane. The medicine was dissolved in from one hundred to two hundred parts of water. This same solution destroys the life of acari and other similar parasites in from twenty to twenty-five minutes. A very dilute solution of this acid does not destroy germs of fermentation so readily as its concentrated solution.

Stephsanides³ has used this medicinal agent in very small doses (amount not stated) in a potion with laudanum for the cure of an obstinate attack of dysentery which would not yield to the usual treatment; he obtained complete success. He used at the same time enemata containing the same substance and a few drops of laudanum. This method of treatment was based on the theory that dysentery was a diphtheritic or parasitic disease.

Its use in polyarthritic rheumatism in Traube's clinic by Stricker has been presented to the readers of the *JOURNAL*,⁴ and in an article by Dr. Putnam,⁵ and is still further confirmed by Senator.⁶ The latter also prescribed with success salicylate of soda in doses of from seven and a half to ten grammes, either all at once or in divided doses at short intervals. Yet this treatment did not prevent relapses or local inflamed joints; in two such cases subcutaneous injection of carbolic acid had a marked benefit. Katz⁷ also confirms Stricker's observations.

Hypodermic Injection of Carbolic Acid for Polyarthritic Rheumatism. — Senator⁸ has used a three per cent. solution of carbolic acid injected into the subcutaneous cellular tissue in the inflamed joints in twenty-five cases. In one hundred and fifty separate injections, no pain, inflammation, or abscess occurred, but he never employed more than three simultaneous injections, and nine centigrammes were the largest amount injected at one time; the treatment lasted six and eight days, with intermissions of several hours between the injections. The re-

¹ *JOURNAL*, February 10, 1876, page 152.

² *Journal für praktische Chemie*, ii. 215.

³ *Wiener medizinische Presse*, April, 1875.

⁴ *JOURNAL*, February 10, 1876, page 164.

⁵ *JOURNAL*, February 24, 1876, page 212.

⁶ *Berliner klinische Wochenschrift*, No. 6, 1876.

⁷ *Deutsche medicinische Wochenschrift*, No. 4, 1876.

⁸ *Berliner klinische Wochenschrift*, No. 6, 1876.

sult of this treatment was relief to the pain and diminution of the swelling; it was more uncertain in the metacarpal and phalangeal joints, but in the larger joints, especially the shoulder, one injection was generally sufficient. Relief followed in an hour, and the more acute the disease the greater the relief. Little if any benefit occurred to chronic cases. The same treatment was applied to myalgia. Neither recurrence of the symptoms, abatement of the fever, nor induction of perspiration was affected by this treatment, but only transitory and palliative relief to the local inflammation.

*Aconite and Aconitia (Aconitine).*¹—The variability in the strength of aconite and its preparations has become so well known that M. Oulmont has undertaken a revision of the pharmaco-dynamical and therapeutical properties of this medicament. His experiments were conducted on dogs and confirmed by clinical observations in human beings; he deduces the following conclusions:—

(1.) The activity of aconite varies, according to the portion of the plant selected;

(2.) According to the country in which the plant grows, and period of growth (more active before flowering than after);

(3.) According to the method of preparing the medicine.

Generally speaking, the leaves, stems, flowers, and seeds have an uncertain action, and may in some instances have no action whatever. The root contains the active principle, the activity of which varies according to the country from which the root is gathered. Cultivated aconite has less activity than that gathered from the mountains; of the latter, that gathered from the Swiss mountains is more active than that from the Vosges mountains (Alsace). Alcoholic tinctures of the flowers and stems may be given to animals in doses of thirty or forty grammes (about eight ounces) without any appreciable effect. On the other hand, alcoholic tinctures of the fresh root should be prescribed only in small doses, on account of its inequality of action, which is in proportion to the water of vegetation present in the roots. Tinctures, both of the leaves and of the roots, have an unequal and uncertain action. The extract from the Vosgian aconite has a uniform strength; two or three centigrammes can be daily and gradually increased to fifteen centigrammes without fear of accident. But that from the Dauphiné district (near Savoy) should not be used, on account of the difficulty of fixing a safe dose, and also on account of its violent activity.

Aconitia can hardly be said to represent the active principle of aconite, and on account of its variability in strength and the violence of its effect, if it is ever used internally, it should be very cautiously administered.

¹ Oulmont and Laborde, Académie de Médecine, December 14, 1875; Gazette hebdomadaire de Médecine et de Chirurgie, December 17 and 31, 1875.

Franceschini¹ made some experiments on animals under the advice of M. Laborde. He used a substance called nitrate of aconitia (*azotate d'aconitine*). Aconitia in its amorphous state is insoluble and incapable of combining in the form of a salt; moreover, the local action of the alkaloid is so painful that its internal administration by the mouth seems forbidden. The production of crystallized aconitia by Duquesnel presents the opportunity of employing this substance in solution by the hypodermic method. Franceschini used the following formula:—

Nitrate of aconitia	10 centigrammes.
Distilled water	10 cubic centimetres.

The aqueous solution was hastened by the previous addition of a few drops of alcohol, and by adding the water gradually. He also used internally, by the stomach, granules of nitrate of aconitia in doses of half a milligramme ($\frac{1}{30}$ of a grain).

With regard to the effects of nitrate of aconitia, it was observed that in the lower animals there was at first (two or three minutes after the injection) a slight exaggeration of the phenomena of general sensation as shown by irritation of the nerve trunks; but the cutaneous sensation (bottom of the hind feet) diminished very rapidly. Even with such minute doses as one quarter of a milligramme the diminution of sensation was quite marked, and the point of a bistoury was thrust into the paw of a dog used for the experiment, without producing the slightest cry or reflex action. The period of exaggerated sensation was followed by that of anæsthesia, as soon as the drug was absorbed by the circulation.

In the human subject, after an injection of one fourth or one half milligramme a burning sensation was experienced, and the skin surrounding the puncture became red; this redness persisted for at least one half an hour, and then the peculiar acrid taste of aconite was perceived in the tongue, as well as the tingling of the lips, a sensation which extended to the extremities and finally over the whole surface of the body. On repeating the doses of one fourth to one half milligramme every three or four hours, the phenomena of irritation were less pronounced, and the therapeutical effects were more marked. Though aconite is eliminated somewhat with the urine, yet a portion is apparently destroyed or decomposed in the system. Great pallor of the skin of the ear of a rabbit followed the subcutaneous injection of one fourth of a milligramme, and the blood-vessels appeared almost devoid of blood and their interior calibre seemed abolished. After section of the great sympathetic in the neck, though the vessels were enormously distended, this pallor was as marked as before the section. The author of this thesis remarks that his experiments confirm in every particular the deduction of Professor Gubler, that “the marked disturbance in the functions of sensation

¹ Thèse Doctorat, No. 369, Paris, 1875.

leads to the conclusion that aconitia acts principally upon the nerves of sensation, whose functions it suppresses or reduces; but if anæsthesia is produced, the circulation is simultaneously calmed, the calibre of the capillaries is reduced, and the temperature is lowered.”¹

Deshaye² gives a detailed account of twenty-eight cases of typhoid fever treated with the alcoholic tincture of aconite at the Hôtel Dieu de Rouen. In addition to these cases he cites twelve others treated by him outside of the hospital, and ten cases treated by Levasseur, a total of fifty cases, two only of which ended fatally. These fatal cases occurred after pneumonia, which came on in one instance after exposure at an open window during convalescence, and no perforation of the intestines could be detected at the autopsy of either case. The theory of the use of aconite in typhoid is based by Deshayé on the fact that the severe fever is due to an inflammation, and that aconite controls the elevation of temperature on the antiphlogistic principle. He repudiates the idea of its being a specific *sine quâ non* of typhoid fever, and cautions against its use in those cases which are characterized at the outset by severe adynamia and prostration. An improvement and sometimes complete subsidence of the temperature were noted in from ten to twenty days from the commencement of the treatment, and an abatement occurred within twenty-four hours after the first dose. On the subsidence of the fever, quinine was employed.

Among the immediate effects of the treatment, Deshayé mentions profuse perspiration, abundance and limpidity of the urine, speedy appearance of the rose-spots and sudamina, moisture of the tongue and mouth, and a peculiar furfuraceous desquamation of the skin. With regard to the rose-spots, he quotes Grisolles as saying that these are not critical and have no prognostic value; and that a few hours after the administration of aconite a new and more confluent eruption occurs, coincident with more favorable symptoms. A liquid diet of beef-tea or veal broth was given, with the free use of ice. The aconite was administered at the very outset. The form of potion was —

R̄ Aquæ destillatæ	120 grammes.
Tincturæ aconiti	1 grammes.
Aquæ aurantii floram	q. s. M.
Dose, one teaspoonful, p. r. n.	

The author does not claim this as abortive, but as antiphlogistic treatment.

Electricity in Intestinal Obstruction. — M. Fleuriot reports³ several cases of successful treatment in obstinate constipation and intestinal obstructions by the application of one electrode to the anus and the other to the abdomen.

¹ Journal de Thérapeutique, January 10, 1876, page 24.

² Gazette hebdomadaire de Médecine et de Chirurgie, September 24, and October 1 and 15, 1875.

³ Thèse inaugurale, Paris, 1875, No. 3, and Revue des Sciences médicales, January, 1876.

*Theory of the Action of Compressed Air.*¹ — Dr. Schnitzer observes that the inspiration of compressed air and its expiration into a rarefied air increases the force of the heart's impulse, and consequently that the blood is driven into the arteries with increased pressure; on the other hand, the reflux of the venous blood towards the right side of the heart is slightly obstructed. Thus the general effect of the use of compressed air as above described would be an increased amount of blood in the larger circulation, and its diminution in the lesser or pulmonary circulation. The inspiration of rarefied air causes a contrary effect: a diminution of blood in the larger or systemic circulation, and its increase in the lesser or pulmonary circulation. These results are modified, however, by the larger amount of oxygen absorbed by the inspiration of compressed air, and again by the larger product of carbonic acid produced by the expiration in a rarefied air. Another element still further complicates the result: the effect of pressure exercised upon the capillary circulation.

The therapeutical applications of the inhalation of compressed air are summarized by Dr. Schnitzer: the respiratory force may be increased, the pulmonary capacity may be enlarged and its ventilation promoted. The therapeutical indications are applicable to the following pathological conditions: (1) General feebleness of the respiratory organs; (2) chronic bronchial catarrh; (3) pulmonary catarrh and the first stage of phthisis; (4) emphysema; (5) nervous asthma, in which there is no organic lesion of the heart or lungs.

BALFOUR BROWN ON THE MEDICAL JURISPRUDENCE OF INSANITY.²

THE second American edition of this valuable work exceeds the first London edition by two hundred pages, and is enriched by some new subject-matter, as well as by new illustrative cases and references to recent English, Scotch, and American decisions. Its convenience as a book of reference is greatly enhanced by a subdivision of its chapters into sections, with appropriate headings, and the consequent remodeling of its index and table of contents. For a book written from the legal point of view, it is remarkably well up with the prevailing opinions of professional alienists. This is owing to certain special facilities enjoyed by the author for observing the insane in the hospitals of Great Britain. It admits the necessity of recognizing all those controverted forms of insanity which the prejudice and ridicule of the last twenty years have only served to establish more firmly, such as partial intellectual mania (monomania), moral mania, and moral monomania; the latter including kleptomania, erotomania, dipsomania, pyromania, and suicidal and homicidal mania. It treats of the

¹ Wiener Klinik, July, 1875, page 165.

² *The Medical Jurisprudence of Insanity.* By J. H. BALFOUR BROWN, Esq. Second American Edition. Philadelphia: Lindsay and Blakiston. 1876.

legal relations of somnambulism, drunkenness, epilepsy, aphasia, and delirium quite fully, and devotes long chapters to the admissibility of the evidence of the insane, to the examination of persons supposed to be of unsound mind, and to medical experts. The style is rather florid for a scientific composition, with a superabundance of quotation.

This work will serve the purpose of a text-book if used side by side with that of Dr. Ray. The experienced alienist, however, will take exception to some of the opinions advanced, and will feel the absence of that intimate knowledge of the obscurer forms of mental disease which cannot be gained at second hand nor by an unprofessional observer. As the question of the extent of the responsibility of those admitted to be partially insane is now uppermost in many minds, let us examine our author upon this point.

The chapter on capacity and responsibility contains an able and ingenious argument in support of the English test of the knowledge of right and wrong as applicable to all cases involving the responsibility of insane criminals. It is too ingenious, in fact, for the test unexplained would be of no service to a jury, and as interpreted by our author would tend to confuse rather than enlighten. This so-called test has passed through many phases of exposition, but the load it is made to carry by its latest expounder well-nigh breaks it down. It has been construed as applicable to the abstract moral quality of acts other than the one in question; to the criminal act itself in the abstract; to the knowledge of the legal nature of the act; and to the moral nature of the act with reference to the actor. Here it is made to cover all cases of delusion and of disordered volition. For instance, with regard to intellectual monomania the author says, "Should we not expect to find a man knowing right from wrong in relation to every subject upon which he was sane, and yet unable to appreciate the distinction in relation to conduct which was dictated by his insane belief?" But if this knowledge is so exactly measured by the extent of the delusion, how much safer and more obvious would delusion be to the average juror, as a test in such cases? So also in regard to the volitional character of insane acts, including insane impulse and weakness of mental inhibitory power, the writer says, "This knowledge of right and wrong, then, is the capacity which a man has, at the particular moment of the deed, of being influenced by motives, — the power he has of refraining from the act in question." And of impulsive insanity, "Any one who labors under an irresistible impulse cannot with any truth be said to have at the instant of such compulsion a knowledge of right and wrong."

In this it seems that our author shows his legal bias, for, instead of agreeing with Dr. J. Russell Reynolds,¹ and with Judge Doe,² that there are no well-established or satisfactory legal tests of insanity, he labors to make one of the old tests cover all the more newly-admitted forms of mental disease; and he would further have us believe that English judges have always striven to apply this test with all the author's liberality of interpretation!

There is no single scientific test of mental disease, for if insanity is invariably one and the same disease of the brain (which it probably is not), it at least

¹ On the Scientific Value of the Legal Tests of Insanity. London. 1872.

² State of New Hampshire v. Jones, 1872.

affects the three grand divisions of mind disproportionately, or even separately, as far as the most obvious mental symptoms are concerned; and yet so intimately are the mental faculties correlated and dependent on each other that one cannot safely insist that a murder, for instance, proceeds out of the sound part of an unsound mind, because at first blush it seems to do so. The law, on the other hand, narrows the inquiry to the state of mind in reference to a certain act, and by the application of a single test, making no allowance for the general weakness and loss of balance consequent on what seems to be a partial mental disorder. In this way it has ridden rough-shod over scientific criticism and the humane scruples of physicians, until forced gradually to more and more leniency towards acts which spring from an unsound mind, even when the connection between the disease and the act cannot be distinctly traced. When this leniency is extended to the remission of the death penalty in all cases where there are reasonable grounds for suspecting insanity, alienists will be content to let time be the test of the correctness of their views, in any case, even if it is time spent in prison rather than in hospital.

Of the graduation of responsibility, our author says, "The law has very properly refused to gauge guilt and accurately apportion punishment," and this simply because of the difficulty in the case. Not only is guilt proportionate to the varying degrees of intelligence and mental power in different individuals, but to no two persons does the same punishment mean the same thing. Hanging, for instance, is not the same to the youth with all the possibilities of life before him as to the old man whose sands of life have nearly run out. Imprisonment is one thing to the poor prison habitué and another to the luxurious forger. Now if the law refuses to weigh out justice by the pound to the sane, which class it claims a right to punish, why does it make such nice distinctions among the insane, whom it exempts from punishment? The common-law judges of England, in their answers to the House of Lords, enunciated the following principle in regard to delusion, which, our author says, is still good law: "A man laboring under delusion shall be in the same position as to responsibility as if the facts were real." Judge Ladd, of New Hampshire, says this is a piece of exquisite inhumanity. "It practically holds a man confessed to be insane accountable for the exercise of the same reason, judgment, and controlling mental power that is required in perfect mental health. It is, in effect, saying to the jury, the prisoner was mad when he committed the act, but he did not use sufficient reason in his madness." For instance, if a man kills another because of an insane belief that he has done him some great wrong, the act is murder; but if he kills the man from an insane belief that the man will kill him if he does not, it is homicide in self-defense, and no crime. The judges attempted to guard against so shocking a consequence by the qualifying phrase, "and is not in other respects insane;" but this hardly helps the matter, for if insanity is shown only in the first instance by the insane delusion of injury or persecution (a very common form), it is no apology for the crime, which, although evidently the offspring of delusion, is supposed to proceed from the sound part of the mind! Judge Ladd further says, "This is very refined. . . . No such distinction ever can or ever will be drawn into practice, and the ab-

surdity as well as the inhumanity of the rule seems to me sufficiently apparent without further comment."¹

Although English law tests and precedents are defended in the work before us, we find throughout the argument a modified and softened interpretation of them. No such doctrine is found as has been advanced by recent writers, indignant at some supposed abuse of the plea of insanity, that certain insane criminals might with propriety be hung for the protection of society and a warning to others. On the contrary, it is stated that "although it might as an example deter others, the law does not punish such persons, but contents itself by protecting the community from the commission of the crime again by the same individual." This idea of holding some insane persons responsible to the full extent of the law is not a new one, but is to be regarded as a relic of the more unenlightened days of medical jurisprudence, when to be insane one must have been "totally deprived of his understanding and memory." As Lord Erskine said in 1800, when defending Hadfield, "no such madness ever existed in the world." The principle of the responsibility of the insane in certain cases, and with certain limitations, is, however, a correct one, but its application should be surrounded with every safeguard which medico-legal science can devise. Legal tests and definitions are not sufficient unless controlled by competent expert testimony in each case.

It is natural enough for an English lawyer to stand up for English law, and we are not surprised to find our author criticising Dr. Maudsley's indorsement of the recent New Hampshire decisions of Judges Ladd, Doe and Perley. The plan of the latter, to give all questions of insanity to the jury as matters of fact and not of law, could not work any more injustice than the legal-test system has done. According to the English medical press, the jury in the recent case of Blampied saved an insane homicide from the fatal ruling of the judge that, although undoubtedly insane, he was responsible to the fullest extent of the law.

We have no space to take up the various forms of insanity in their relation to law, as treated in the work before us, but may do so hereafter.

T. W. F.

DA COSTA'S MEDICAL DIAGNOSIS.²

THE profession long ago recognized in this elaborate treatise a valuable contribution to the literature of clinical medicine, and it has been regarded as almost without a rival in this special department of medical writings. It is scarcely necessary for us to do more than to chronicle the fact that this stamp of approval has not been withdrawn by the later generations of medical students and practitioners, and that a new edition of this standard work has appeared to attest their continued reliance upon its teachings and authority.

It must not be inferred, however, that the author has simply reprinted his former pages. We find scattered through the new edition abundant evidences

¹ State v. Jones, 50 N. H. 369.

² *Medical Diagnosis, with special Reference to Practical Medicine. A Guide to the Knowledge and Discrimination of Diseases.* By J. M. DA COSTA, M. D., Professor of Practice of Medicine and Clinical Medicine at the Jefferson Medical College, etc. Fourth Edition. Philadelphia: J. B. Lippincott & Co. 1876.

of fresh work. Several parts have been rewritten, as, for example, the chapter on nervous diseases, and many of the pages display some new note or comment to show that careful and painstaking revision has been made to bring the book up to the point required by the more recent progress in medical science.

It is impossible with our limits to make a satisfactory analytical notice of this well-filled volume. Nor does it seem necessary to do so, inasmuch as the nature and quality of the work are well known and appreciated. We content ourselves, therefore, with commending to the favor of those of our readers who are unacquainted with its merits this reliable and emphatically practical guide to medical diagnosis.

SANITARY SUPERVISION OF SCHOOLS.

THE subject of school hygiene, about which so much has been said and written in recent times, receives but scanty recognition at the hands of municipal authorities. The ears of those who ought to hear are very dull, and as a consequence the school-children, who comprise one fifth of the population, suffer the effects of this indifference to their physical welfare. We anticipated that the reorganization of our city school committee would be accepted as a seasonable opportunity for putting into practice some of the teachings concerning the necessity of strict sanitary supervision of schools. The election of school supervisors afforded an excellent occasion for the establishment of an office of great importance to the health of our school-children. We regret exceedingly that the occasion has been allowed by the school committee to pass without some more substantial evidence of an appreciation of the importance of practical hygiene as applied to the public schools. With all respect for the acknowledged ability of the gentlemen who have been chosen as supervisors, we believe that our school system would not have suffered, but rather would have gained, if among those selected there had been some who, in addition to their proficiency in examining scholars to see how well their minds had been crammed, had also by special training the power to render efficient service as expert instructors and authoritative regulators in all departments of school hygiene. It was a grave mistake that in canvassing the merits of candidates this element of proficiency in school sanitation was so completely left out of sight by the committee.

The need of a sanitary supervisor of schools is particularly illustrated at the present time, when diphtheria and scarlatina are unusually prevalent. The school-room is admirably adapted to disseminate the infection of these dreaded diseases. The children assemble from all sorts of homes, are brought into closest relation with their mates, and at the end of the session scatter again. What better means could be devised for sowing broadcast the seeds of contagion? If the board of supervisors had upon it one or two medical men, with power to act and intelligence to advise, the unlimited and unrestrained spread of communicable disease in schools would have less chance than it does at present; for well-known principles of hygiene as adapted to contagious affections would have responsible agents for their practical application, and at least something could be done, either advisory or mandatory, to protect the commu-

nity. At present nothing operates to prevent the spread of contagious disease in schools except the interference of the teacher to oppose the premature return of a convalescent scholar, or the uncertain intelligence and solicitude of parents to the same end, or the occasional forethought of the medical attendant who remembers that his duty is not fully done when his young patient is pronounced out of danger of death, though still a source of danger to his neighbors.

The matter of school hygiene is encompassed with great difficulties, but the difficulties will not grow less if the attempt and purpose to overcome them is neglected and the wisest methods are regarded with indifference.

VIVISECTION.

THERE has recently been presented to Parliament the report of the royal commission "on the practice of subjecting live animals to experiments for scientific purposes." They were to "consider and report what measures, if any, it may be desirable to take in respect of any such practice." The commission appears to have investigated thoroughly the subject and to have endeavored to arrive at a just conclusion. They received evidence from fifty-three witnesses, including physiologists, physicians, surgeons, and representatives from the various societies whose object is to oppose vivisection. They state in their report that "it would require a voluminous treatise to exhibit in a consecutive statement the benefits that medicine and surgery have derived from the discoveries due even to one class of experiments only," namely, operations performed on living animals for the purpose of examining the processes of life, and mention as due to such operations the discovery of the circulation of the blood, the discovery of the action of the lacteal and lymphatic system of vessels, and the discovery of the compound function of the spinal nerves. Reference is also made to the experiments in which dangerous drugs are administered for discovering their physiological action, and of finding antidotes to their poisonous effects, or for the purpose of assisting legal investigations. And still another class of experiments is referred to, — those by which disease is produced in animals with the view of obtaining precise knowledge of the causes, mode of attack, and processes of such disease. The commissioners vindicate physiologists, physicians, and medical students from the imputations of cruelty and of indifference to suffering which have been cast upon them. They assert that even if were possible to suppress the practice of experimenting on living animals, such a prohibition should not be attempted. "The final conclusion at which the commissioners arrive," says *The British Medical Journal*, to which we are indebted for the information here given on this subject, "is to recommend the enactment of a law which shall vest in the secretary of state the power of granting licenses to persons desirous of performing experiments on living animals." The licenses should bear conditions to insure that no unavoidable suffering shall be inflicted. Inspectors of knowledge and position such as to command the confidence of both men of science and the public should be appointed, and licenses should be revocable on proof of abuse, but as a safeguard against misuse of this power, an appeal to a judge of the supreme court with three competent assessors is recommended.

MEDICAL NOTES.

— A curious gunshot injury is reported in *The Lancet* of February 19, 1876. An officer of the royal navy, during the Ashanti campaign, was admitted on board the hospital ship with a history of remittent fever and dysenteric diarrhœa. In a few days he died. It appears that he had received a bullet wound in the chest in New Zealand, in 1860, but grave doubts were entertained at the time as to whether or not the bullet had penetrated the chest, so trifling were the symptoms attending the injury. On a post-mortem examination an old circular scar, half an inch in diameter, was found in the skin above the right nipple, and over the fourth rib, near its union with the cartilage, were corresponding marks of injury to the rib. A small, hard, heavy, circular body, about half an inch in diameter — which on examination proved to be a leaden bullet — was found encysted outside the pericardium, above the right ventricle. It was lodged in the triangular interspace between the aorta and pulmonary artery. The bullet was fixed in position by some bands of fibrous tissue between it and the pulmonary artery and aorta; and there was evidence of previous inflammatory exudation in its neighborhood. On opening the sac in which the bullet was lodged, some earthy matter, probably carbonate of lead, was found on its surface, together with a waxy-looking substance, possibly broken-up bone tissue mixed with particles of lead. The aortic and pulmonary valves were quite healthy.

— At a recent session of the Société de Biologie, M. Courty reported the results of experiments made by him regarding the entrance of air into the veins. He obtained some tracings which showed the phenomena which are produced by the entrance of air. He inferred from the experiments that the accidents following upon the admission of air into the veins are due to a complete arrest of the circulation, the result of an asystole following excessive distention of the right heart.

LETTER FROM VIENNA.

MESSRS. EDITORS, — The winter has passed quickly away, and leaves but a short time more for work this term. The usual number of lectures and "private courses" has been given, and the general plan of instruction remains unchanged. It surprises every one, however, who comes abroad for the first time, that the professors, with the exception perhaps of those connected with the clinics for skin diseases, are not the ones from whom he receives the most of his instruction, but that his real teachers are the assistants, who have the patients and wards under their immediate charge. Their teaching, however, is essentially that of the professor. From the number of cases which they see, they are in a position to make observations for themselves, which from time to time appear in print. During the last year, Dr. Ludwig Bandl, first assistant in Prof. Carl Braun's clinic, has published a monograph on rupture of the uterus,¹ which has been well received here, and a summary of which may interest some of your readers.

¹ Ueber Ruptur der Gebärmutter und ihr Mechanic. Nach klinischen Beobachtungen von Dr. Ludwig Bandl. Verlag von Carl Czermak. 1875.

The deductions are based chiefly on thirteen cases which have come under the author's own observation, and nineteen others mentioned in the hospital records. From these it appears that rupture of the body of the uterus rarely if ever occurs, but that it is primarily of the cervix, which was found to be greatly thinned and elongated. An explanation of this is apparent when we consider the normal action of the uterus and cervix, and the conditions that may cause this thinning and elongation.

From the arrangement of the muscular fibres of the body of the uterus, as shown by Luscka, their action must be twofold: first, to expel the contents; and secondly, to draw back the cervix, as it softens, over the presenting part of the child. Through this second action of the uterus, the softened part is slightly stretched and thinned before the os externum is fully dilated, and the os internum comes to stand at the level of the entrance of the pelvis. At this period, the adnexa of the uterus, especially the ligamentum teres, fix the uterus in its place, and the force of the uterine contractions is exerted in expelling the contents, and in drawing the dilated os externum over the presenting part.

But if before the os externum is retracted there exists a disproportion of space, which will not allow the passage of the child, the presenting part will be driven tightly into the entrance of the pelvis, wedging in, at the same time, the lower segment of the cervix, and preventing the os externum with this lower segment from being retracted. The uterus still contracting, the resistance of the adnexa is first overcome, and, since the further progress of the child is hindered, the force of the contractions is directed against the free and softened portion of the cervix, which stretches and becomes thin in proportion, till from a normal thickness of four centimetres it may be reduced to five millimetres. By this elongation of the cervix the os internum may stand nearly on a level with the umbilicus, and its situation may be distinguished by a well-marked ridge, to be felt through the abdominal walls on careful palpation. The child is to be distinctly felt, covered only by the abdominal walls and thinned cervix, while the contracted uterus fits over it like a cap. Under such conditions it is easy to see how a stronger contraction of the uterus than usual can force its contents through the cervix, and that thus the rupture can occur spontaneously.

The rupture may extend through the cervical tissue only, or the peritoneum may be at the same time more or less torn up from its connective tissue, and the child born under it; or it may be torn through, and the child born into the peritoneal cavity. From the cervix the rent may extend into the vagina or into the body of the uterus.

The cause of this disproportion of space is to be found either in the child or in the mother. In the child, it is found in a faulty presentation or too large a presenting part. Three of the author's cases were by shoulder-presentation, and two by hydrocephalus. In the mother, the narrowing of the pelvis is the most frequent cause. The remaining eight cases were by head presentation and narrow pelvis.

The analysis of statistics further shows that rupture occurs most frequently in pluriparae, with but a moderate amount of narrowing of the pelvis. The

first part of the statement is explained by the fact that in primiparae the uterus will usually become inflamed or exhausted before the cervix is dangerously thinned; but that in a subsequent labor the cervix yields more easily and the process can proceed further. The second part is explained by the fact that a high degree of narrowing of the pelvis is more easily recognized, and operative interference earlier used.

In none of the cases was disease of the uterine tissue found.

Besides spontaneous rupture, above described, this accident to the cervix has occurred during an attempt to turn the child; and this is the practical point, for it is easy to see how the displacement of the child necessary in turning could readily rupture the thinned cervical walls when such conditions were present.

These observations place the subject on a firmer foundation, and give more precise indications for interference. And the general rules laid down are that in cases especially which have once overcome a disproportion of space, and in which it is again present, turning should be performed early, before the cervix has been thinned; or if this thinning has developed, the risk in turning is too great, and, if the forceps cannot be used, resort should be had to craniotomy or embryulcia.

In connection with softening of the cervix, there is a point which is not mentioned by the later writers on midwifery, but which Dr. Bandl has often shown the students here; and that is that the cervix does not remain intact until labor sets in, but that the upper part of the cervix has been gradually softened and stretched out under the influence of the slight contractions of the uterus during the last weeks of pregnancy. Thus the os internum comes to stand higher and nearer the position it occupies at the end of the first stage of labor. That this is really the case is easily proved by the examination of a woman in the last weeks of pregnancy, where the cervix is open through its whole extent. The finger is passed through the cervix until it comes to the sharply defined ring at the upper part, which is usually considered as the os internum; but this is not the internum, for if the finger is curved forward over this sharp projection it falls into a kind of pouch, which is the already softened part of the cervix. Then by pushing back the uterus from without, and gradually working the finger onward, one feels another projection, which is shown to be the true os internum, which, when the uterus contracts, comes out distinctly.

Prof. Carl Braun has lectured regularly during the term, and in the course of one of his lectures he said that he considered that the after-effects of craniotomy at full term are not apt to be so serious to the woman as those arising from an induced premature labor. And again, speaking on the subject of eclampsia, he stated that in his experience the prognosis was not so favorable in those cases in which little or no albumen was present in the urine.

The number of births this year has not been very large, but almost all the abnormal cases have been represented, including one of rupture of the cervix uteri; this latter was due, probably, to an attempt at turning which was made before the patient was admitted to the hospital.

W. F. W.

VIENNA, February 10, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING MARCH 11, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	679	33
Philadelphia	800,000	376	24
Brooklyn	500,000	274	28
Boston	342,000	164	25
Providence	100,700	29	15
Worcester	50,000	25	26
Lowell	50,000	21	22
Cambridge	48,000	26	28
Fall River	45,000	16	18
Lawrence	35,000	18	27
Lynn	33,000	11	17
Springfield	31,000	8	13
Salem	26,000	8	16

Normal Death-Rate, 17 per 1000.

BOOKS AND PAMPHLETS RECEIVED. — Statistics of the Births, Marriages, and Deaths in the City of Philadelphia for the Year 1874. Compiled by William H. Ford, M. D., Secretary of the Board of Health.

Lectures on Nursing. By William Robert Smith. Philadelphia: Lindsay and Blakiston. 1876. (From A. Williams & Co.)

Diseases of Modern Life. By Benjamin Ward Richardson, M. D., etc. New York: D. Appleton & Co. 1876.

Surgery of the Arteries. Lettsomian Lectures of the Medical Society of London. London: J. and A. Churchill, New Burlington St. 1875.

Eighth Annual Report of the New York Orthopædic Dispensary and Hospital. 1876.

A Treatise on Surgery, its Principles and Practice. By T. Holmes, M. A. Philadelphia: Henry C. Lea. 1876.

The Cause of the Commencement of Parturition. By Charles M. Combie, M. B., M. C. London: J. and A. Churchill. 1875. (From John Pennington and Son, Philadelphia.)

Determination of the Refraction of the Eye with the Ophthalmoscope. By Edward G. Loring, M. D. New York: William Wood & Co. 1876.

First Annual Report of the Board of Health of the State of Georgia, for the Year ending October 12, 1875. Atlanta. 1876.

Insanity in its Medico-Legal Relations. By A. C. Cowperthwait, A. M., M. D. Philadelphia: J. M. Stoddart & Co. 1876. (From James Campbell.)

Thirty-Third Annual Report of the Registration of Vital Statistics in Massachusetts. Edited by F. W. Draper, M. D. Boston: Wright and Potter. 1876.

SUFFOLK DISTRICT MEDICAL SOCIETY. — Regular meeting will be held on Saturday, March 25th, with the following order of proceedings:—

Report of Nominating Committee.

Report of Committee on Contagion of Diphtheria from Dead Bodies.

Drs. C. D. Homans and B. J. Jeffries, Letters illustrating Practice in the Olden Time.

Dr. E. W. Cushing, Case of Pharyngitis, complicated with Otitis Media.

Dr. H. W. Williams, Specimen of Orbital Tumor.

Dr. J. R. Chadwick, Case of Miscarriage, Septicæmia, Recovery.

Dr. R. M. Hodges, Spiroidal Fractures.

Members of other state and district societies are cordially invited.

MARRIED. — March 9th, in Boston, by Rev. C. A. Bartol, D. D., assisted by Rev. S. H. Winkley, Col. J. H. Baxter, Chief Medical Purveyor U. S. Army, to Miss Florence Tryon of Boston.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XCIV. — THURSDAY, MARCH 30, 1876. — NO. 13.

A CASE OF UTERUS SUBSEPTUS.¹

BY W. L. RICHARDSON, M. D.,

Visiting Physician of the Boston Lying-In Hospital.

WHEN it is remembered that the vagina, uterus, and Fallopian tubes owe their origin to the coalescing, at about the eighth week of embryonic life, of two parallel tubes, it is readily conceivable that a great variety of malformations may be found, originating in a greater or less arrest of development in the union of these so-called ducts of Müller.

An examination of a large number of such cases has revealed the fact, according to Schroeder, that all these various malformations may with very rare exceptions be grouped into five classes. The first of these includes cases in which there is an entire absence, or a merely rudimentary development, of the uterus. In these cases there is apt to be a short vaginal cul-de-sac, although this may be wholly wanting. The second class comprises those in which, while the duct of Müller on one side has developed normally, the other is either entirely wanting or more or less imperfectly developed; the result is that the uterus appears as an oblong cylindrical body terminating in a sharp point above, and curving towards one side or the other of the abdominal cavity. From its upper extremity a Fallopian tube leads to the ovary. The vagina is usually normal. In the third class, both of the ducts of Müller may have developed, but with no union between their adjacent lateral borders. This form is exceedingly rare. The fourth group includes those cases in which both ducts have developed, but in which the lateral adjacent walls have failed, to a greater or less extent, to coalesce, and the result is the existence of a septum, more or less dividing the body of the uterus into two separate cavities or horns. The fifth class embraces those in which the externally normal uterus is found to be divided into two portions by a septum. This division wall may be variously modified; in some cases, although this is very rare, reaching from the os only a short distance towards the inner os, or, as in others, extending so as to divide the whole cavity. In this class, as in the fourth, the vagina may be either single or double.

¹ Read before the Obstetrical Society of Boston.

Dr. Luigi Corazza reports¹ a case in which he found a double vagina and double os uteri, but only a single uterus. There was no appearance whatever within the ora of any existing septum. The subject was a young unmarried girl seventeen years of age, who died in 1866 of typhus fever. The menstruation had always been regular. At the autopsy a double vagina was found, the left canal being a trifle longer than the right, while the latter was somewhat broader than the former. At the upper extremity of each vagina was an os. The left one admitted of the passage of a very small sound, while an instrument of the ordinary size easily entered the right one. Within the uterine cavity the appearances were in every respect normal. The right os was situated directly opposite the median line of the uterus.

There recently came under my observation in the out-patient department of the Massachusetts General Hospital a patient whose case is still more remarkable than that just mentioned, inasmuch as the vagina, like the uterus in the preceding case, was normal, while there were two distinct and perfect ora. I have been unable to find a similar case on record, although Schroeder in the tenth volume of Ziemssen's Cyclopædia states that such a condition is possible; but he gives no record of such a case.

Mrs. —, twenty-five years old, began to menstruate when thirteen years of age. The catamenia, which have always been regular, except when interrupted by pregnancy, last about three days. The first few hours of each catamenial period are accompanied by very severe pain. The patient was married September 17, 1871. The catamenia appeared regularly in October and in November of that year, but during the latter month she became pregnant, and was confined at Alna, Maine, August 6, 1872. The child, a boy weighing seven and a half pounds, was born after a natural and comparatively easy labor of twenty-four hours. Nothing unusual was noticed during the course of labor, except the fact that the first few pains were accompanied by the loss of considerable blood. At the time of the delivery the attending physician stated that the patient had a double uterus. The request for a subsequent examination to verify this opinion was refused. The catamenia did not return between the birth of the first and that of the second child (a boy weighing nine pounds), in Chelsea, July 20, 1873, after a normal labor of eleven hours. The attending physician, as in the first case, noticed the peculiar condition of the uterus, and subsequently asked for an examination, which was, however, refused. The catamenia returned once between this confinement and the birth of her third child (a girl of seven and three fourths pounds), which took place in Charlestown, September 13, 1875, after a somewhat tedious labor of thirty-six hours. The same diagnosis of a double uterus was made, and a request for an examination was again refused.

¹ Schmidt's Jahrbücher, Band 148, 1870, page 48.

At the time of her visit to the hospital the patient was nursing this last child, the catamenia not having as yet returned. Her general health was excellent. She complained of nothing except constipation, and the dysmenorrhœa already alluded to.

A vaginal examination showed the vagina to be normal. At its upper extremity two ora could be distinctly seen, the right one appearing like the os of any woman who has borne children, slightly patulous, round, and with an irregular slit on one side. There was a small ulceration at one point. The left os was like that of a virgin. Between the two ora was a band of normal tissue measuring about a third of an inch in width. The sound could be readily introduced into the right os, and by it the length of the uterus was found to be two and a half inches. On bending the sound slightly, it could be easily introduced into the left os. Sounds introduced at the same time through each os were found to have passed into the same cavity. By sharply bending the end of the sound, it could very readily be passed into one os and out at the other. There was no appearance of an inflammatory action having existed at any previous time in the region of the uterus, nor could the patient give an account of the history of any previous uterine disease. A digital examination made per rectum and per vaginam detected nothing abnormal in the size or position of the uterus. A physician, examining the case at the ninth month of pregnancy and recognizing the presence of the two ora, might reasonably have concluded that he was dealing with a case of double uterus, inasmuch as, there being but one uterine cavity, the uterine tumor must have occupied the median line, which would not be the case with a pregnant uterus bicornis or unicornis. An examination made in the non-pregnant state alone could reveal the true condition of things. It is worth noticing that in this case, as in that reported by Corazza, the right os was situated in the median line, directly opposite the centre of the uterus, while the left one was slightly to one side. It was doubtless owing to this fact that the three deliveries in the case just reported took place through the right os. The record of these cases is interesting as showing that a double os does not necessarily indicate any abnormal condition of the uterine cavity above.

In a case, therefore, in which a physician's opinion was asked with reference to the probable duration and mode of termination of pregnancy in a patient whose uterus had two ora, and whose pregnant condition forbade the use of the sounds, the knowledge of the occurrence of such a case as that just cited would materially alter the prognosis which might otherwise be given under such circumstances. The existence of a double os might also readily occasion an error in judging of the stage to which labor had advanced, if the physician should examine hastily one undilated os, without recognizing the existence of

a second os, whose dilatation was more or less completed. This very error was made by the physician who attended the patient, whose case has just been reported, during her first confinement. Examining the left os he gave an opinion that labor had not yet begun, and would not probably begin for some time; while the truth was the first stage was nearly completed, and the child was born soon after the examination was made.

PACHYDERMATOCELE OF LEFT LABIUM.

BY ROBERT P. MYERS, M. D., OF SAVANNAH,

Superintendent of the Georgia Infirmary for Colored Persons.

JANE GRIFFIN, a negro woman, was admitted to the Georgia Infirmary January 30, 1875. She was about thirty years old, apparently healthy, and with a smooth skin; her weight was about one hundred and thirty-five pounds. Six years ago she discovered, on the lower part of the left labium, a lump of about the size of an ordinary hickory nut. This tumor grew gradually till it reached to her knee. She suffered no inconvenience from the growth. She cooked, washed, and scoured. During the past few years her menses have been irregular. She has had three children, born in 1859, 1861, and 1863. There was no pain in the tumor until the last two years, and it has not at any time been enough to prevent her working as usual.

January 29, 1875, she fell and ruptured the tumor, which bled seriously for about twelve hours. I ordered nourishing food, and, as she was in some pain, twenty grains of bromide of potassium every two hours.

February 8th, I removed the tumor in the presence of the class of the Savannah Medical College; chloroform was administered by Dr. Barnard. The first step in the operation was to transfix the neck of the growth (it was pyriform in shape) with a large bagging needle armed with a double ligature of stout flax twine well waxed, each half being tied separately. The entire neck was cut through close to the labium, on the outside of the ligatures. A little hæmorrhage ensued, six vessels were tied, and after the oozing ceased I sewed the lips together and dressed the wound with carbolized oil (composed of two drachms of pure carbolic acid in eight ounces of boiled linseed oil) on patent lint. The dressing was secured with a T bandage. After the operation the patient recovered well from the shock and from the anæsthesia. Nothing occurred to interrupt the satisfactory progress of the convalescence until a fortnight after the operation. At that time, when the wound was nearly healed, the patient rolled out of bed in the night and made a severe wound in the left gluteal region. This wound sloughed somewhat, and in spite of active efforts to stimulate the patient,

she failed, and died on the 5th of March, twenty-five days after the removal of the tumor.

The tumor was fourteen inches long, six inches wide, and five inches thick; its weight was nine and a half pounds. Its appearance was very rough, the skin corrugated and resembling elephantiasis, and of a very dark or black color. My friend Dr. J. C. Le Hardy examined it microscopically. He places it among those rare tumors described by Valentine Mott as pachydermatocele, and by Virchow as fibroma molluscum. Were it not for Dr. Le Hardy's opinion I should most assuredly call it fibroma, such as is described on page 551 in Ziemssen's Cyclopædia of the Practice of Medicine, volume x., Diseases of the Female Sexual Organs; the engraving on the same page represents accurately the appearances of the growth here described.

A CASE OF GESTATION EXTENDING THREE HUNDRED AND SIX DAYS.

BY THOMAS THATCHER GRAVES, M. D. HARV., OF LYNN, MASS.

Miss E., seventeen years old, was married to Mr. H., the mate of a vessel, June 16, 1874; she lived with her husband until he sailed, April 8, 1875. Three days before he left home his wife ceased menstruating, and had intercourse each of the two nights following.

About two or three weeks after he left, I was called, as she felt indisposed, and complained of nausea. Judging her to be pregnant, I gave oxalate of cerium, and, as I learned afterwards, with good effect.

I did not hear from her again until about the expiration of nine months, when her sister called, and said that Mrs. H. was having some pain and wanted me to be in readiness to attend her that night, if necessary.

Three weeks after this the sister called again, and to my surprise said that Mrs. H. had not been confined. I visited her that day; she said that at the expiration of the nine months she had slight pains, and expected to be confined, but she went to sleep, and nothing more occurred. It was then (at the time of my visit) just three hundred days since her husband sailed. I made a careful examination, and established the fact that the woman was pregnant. The os was lying very high, and near the sacrum, but not in the least dilated. The abdomen was very large, but there was no inconvenience therefrom, and indeed Mrs. H. seemed in perfect health. I advised waiting patiently, and visited her daily. In the night of the three hundred and sixth day of pregnancy she sent for me, and after four hours of pretty severe labor she gave birth to a healthy male child weighing ten and a half pounds. The labor was what might be termed a rather dry labor; otherwise

nothing unusual occurred. The child was very fat, with long fingernails, and plenty of hair; it was very vigorous from its birth.

This case seems to me valuable because the length of the pregnancy is so well authenticated by the date of the patient's last catamenial period and of her last sexual intercourse with her husband, as well as by the fact that she was treated for nausea, and was supposed to be pregnant, within two or three weeks after he left. It is interesting to remark that at the expiration of nine months there were some premonitory symptoms of labor.

Under the Code Napoleon three hundred days are all that is allowed by French law as the extreme length of gestation, and if this lady had been so unfortunate as to be amenable to that law, a divorce might be procured, which would most certainly be unjust; and if unjust in this case, why not in others of a similar character, should they occur?

RECENT PROGRESS IN THE PATHOLOGY OF THE NERVOUS SYSTEM.

BY JAMES J. PUTNAM, M. D.

Pathology of Lead Paralysis.—Dr. Ernst Remak,¹ of Berlin, has contributed a carefully-drawn summary of the evidence which leads to the view that lead paralysis is to be classed among the diseases, of which infantile paralysis, so called, is the best-known example, dependent upon a lesion of the motor (and trophic?) ganglionic centres in the anterior cornua of the spinal cord, although, to be sure, in cases of lead-poisoning no such lesion has as yet actually been discovered. Even Tanquerel, in 1839, suggested that these paralyses were probably of spinal origin, from the difficulty of accounting, on any other hypothesis, for the fact that the muscles are attacked so symmetrically, and that of all the muscles innervated by the same nerve a portion only are ordinarily affected, while the rest escape.²

In the absence of proof, however, this theory could not stand, and, no better being offered, the lead paralyses were for some time excluded from among the diseases of the nervous system altogether.

It is plain that the primary seat of the lesion must be either (1) the

¹ Zur Pathogenese der Bleilähmungen, *Archiv für Psychiatrie und Nervenkrankheiten*, vi. 1, 1875.

² As is well known, the most striking example of this is seen in the case of the supinator longus, which, although supplied by the same nerve with the extensors of the hand and fingers, remains unaffected (as was first shown by Duchenne) long after the latter have been paralyzed, and even after other groups of muscles, those of the thenar eminence, the interossei, and the deltoid.

In paralysis of the extensors due to direct injury to the musculo-spinal nerve itself, however, the supinator longus rarely escapes.

muscle; (2) the intra-muscular nerve-terminations (which seem to a certain extent to be physiologically independent of the nerves proper); (3) the nerve-trunk; (4) the spinal cord.¹ With regard to the first view, it is rendered highly improbable by the result of examination of the affected nerves and muscles by electricity. The irritability of the nerve-trunks to the induced (faradic) and direct (galvanic) currents is, namely, in lead paralysis, very much impaired or lost (Erb); the irritability of the muscle itself to the induced current is also impaired or lost, but, on the other hand, for the galvanic current the irritability of the muscle is often greatly exalted (Eulenburg), and its contraction slow and wave-like in character. These conditions, however, are now known to be characteristic of degenerative conditions of nerves and muscles secondary to the lesion of a nerve-trunk itself or to its spinal ganglionic nucleus (infantile paralysis), and are not to be found in primary diseases of the muscles.²

With regard to the second theory (Heubel's), no convincing arguments are to be adduced in its favor, and it is not more plausible than that to be supported below.

In favor of the third view is to be mentioned the fact that several observers have found signs of degeneration in the peripheral nerve-trunks; but this might also occur if the lesion were at the nerve-nucleus in the spinal cord, while, on the other hand, supposing the peripheral nerves to be at fault, the difficulty which occurred to Tanquerel, of explaining the distribution of the paralysis, is not readily to be done away with. In the clinical history of certain spinal diseases, however (infantile paralysis, progressive muscular atrophy (?), glosso-labio-pharyngeal paralysis),³ we find some or all of the essential features of lead paralysis reproduced. The nerve-cells of the cord seem to be grouped together for functional or physiological reasons, the fibres of the nerve-trunks for topographical or physical reasons, and Dr. Remak endeavors to show, by analysis of cases of both lead paralysis and infantile paralysis, that, on the whole, the muscles which are associated in function are associated in disease, whether supplied by the same nerve or not. The supinator longus is thus to be referred to the same group with the biceps and brachialis anticus, the

¹ A fifth theory, that the lesion causing the paralysis is of the sympathetic system, is not now held by many observers, and moreover a case has been reported by Kussmaul and Meyer in which extensive disease of the sympathetic ganglia, due to lead, was unaccompanied by paralysis.

² It should be added that the reactions described are not so uniform in character in lead paralysis as in that from nerve-injury, perhaps on account of a simultaneous poisoning of the muscle itself in the former.

³ The pathological history of these diseases is not exactly identical, and there is some reason to think that the anterior cornua contain both trophic and motor nerve-cells, disease of the former entailing muscular atrophy without causing descending degeneration of the nerves and the tendency to react to electricity in the peculiar manner described above. This is especially true of progressive muscular atrophy, in which the faradic reaction often remains so long as muscle fibre is present.

thenar muscles with the interossei, the peronei with the extensor communis digitorum, etc.

The cause of the predilection of the disease for the nuclei corresponding with the groups of muscles involved in any particular case is still undetermined; but there is some reason to believe that the muscles (that is, primarily the nerve-cells) which are the most severely taxed give out the first. The observations of Manouvriez, though used to prove a different conclusion, should be recalled here as showing that with left-handed painters the left arm is paralyzed more than the right, etc.

The theories of Hitzig¹ and Bäerwinkel, that peculiarities of the circulation in the extensors led to a disproportionate deposition of lead in them, the arteries being also supposed to be made to contract spasmodically by the astringent action of the poison upon their muscular coats, have been thoroughly disproved by Heubel, who has showed that the blood and the muscles contain, after death, comparatively little lead, and further that, the astringent power of the mineral being due to its tendency to combine with albumen, it cannot be supposed to outlive its passage through the stomach. The reason that no changes have as yet been found in the spinal cord in these cases may be that, even when carefully looked for (Westphal, Gombault), they have not been sought in the proper place, inasmuch as a careful comparison of the pathological facts at our disposal makes it probable that the centres for the extensors of the arm lie fairly above the cervical enlargement, those for the ulnar nerve lying at its lowest part, those for the median next above, and those for the biceps and brachialis anticus in the middle.

If these observations are correct, an indication is furnished for galvanizing the upper part of the cord in the treatment of lead paralysis, which indeed Erb, for reasons similar to those here brought forward, has already recommended.

Lead Colic. — Important researches into the pathology of this affection have been made recently by Dr. August Frank, at the Bürger-spital in Cologne, where, in the course of a single year, eighty-six cases of lead poisoning presented themselves, furnished mainly by the numerous white-lead factories in the neighborhood. Of these cases, eighty-two were affected with lead colic, the majority for the first time.

It has for some time past been quite generally believed that lead colic is not due to spasmodic contraction of the muscular coat of the intestines, as used to be held, but that it is a true neuralgia, probably of the sensitive intestinal nerves. The present writer goes further, and shows it to be probable that, as in migraine, the starting-point of the neuralgic attack is an arterial spasm,² causing a sudden anæmia of the

¹ Hitzig has since abandoned this theory.

² This arterial spasm has been shown by Du Bois Reymond to be characteristic of one variety of migraine at least; while in another variety there is perhaps dilatation of the arteries.

tissues in which the sensitive nerves of the viscera are expanded, or perhaps irritating those which Colin has shown to be supplied to the abdominal blood-vessels themselves. These conclusions are drawn from observations upon the state of the radial and, by inference, the abdominal arteries, made with great care by the aid of the sphygmograph. The pulse, both during and in the intervals between the attacks of colic, has a peculiar character, roughly describable as "hard," and marked in the sphygmographic tracings by a curve with a flat top and a very gently inclined descent line, especially towards its lower end, broken by two prominent marks of recoil, one of them close to the summit of the curve. That these peculiarities of the pulse are not due to a loss of elasticity on the part of the artery, from chronic nutritive changes, is shown by the character of the curve itself, the marks of elastic recoil being unusually prominent, and by the facts that they are best marked in fresh cases, that they are absent where the arteries are atheromatous, and that they disappear under the influence of nitrite of amyl. Reasons are given for believing that they arise from an abnormally great tonicity of the muscular coats, which opposes a strong, elastic resistance, both to the dilatation and to the contraction of the artery, the different parts of the arterial system reacting strongly on each other.

Admitting this increased tonicity to be produced by the action of the lead (as was proved by its occurrence in one patient who, for therapeutic reasons, had been taking large doses of lead for some time by the stomach), the next question is whether it is brought about by the direct action of the poison on the arterial muscles, or indirectly through its action upon the vaso-motor nerves or their ganglionic centres. The first of these suppositions is disproved by the experiments of Heubel, which were referred to above; which of the two latter is to be accepted is left undecided. It is believed that during the particular attacks of colic this increased tonicity gives place, for the abdominal arteries, to an absolute local spasm, as already mentioned.

The use of inhalations of the nitrite of amyl, which is known to cause dilatation of the smaller arteries, probably by acting upon either the vaso-motor centres or the vaso-motor nerves, was found to relieve instantly the pain of the attacks of colic, as it often does that of the sympathetico-tonic form of migraine, as well as that of angina pectoris; at the same time the peculiar character of the pulse curve disappeared. The relief was, to be sure, only temporary; but, in the dose of one or two drops, it was found that the inhalations could be repeated as often as was desirable without injurious results.

The Effects of the External Application of Water upon the Blood-Vessels of the Brain. — The results of a long and interesting series of experiments upon this subject are given by Dr. M. Schüller.¹ The experiments were performed upon rabbits, in which the vessels of the

¹ Deutsches Archiv für klinische Medicin, ix.

pia mater were watched through a trephine-opening, the quite transparent dura being generally left uninjured, while applications of water of different temperatures were made to larger or smaller areas of the skin by means of compresses, baths, wet-packs, douches, etc. Not to enter into details, it was found that, apart from the passing and, except under the use of the douche, unimportant reflex contraction, or tendency to contraction, which followed the primary irritation of the sensitive nerves, the production of a certain condition of vascular contraction or dilatation upon the surface of the skin induced the reverse condition in the vessels of the cerebral membranes, the intensity of the latter being proportional to both the intensity and the extension of the former. As the final result of either or all of these applications, the cerebral vessels were left more or less contracted. This effect was especially marked after the *prolonged* application of cold water, especially when the wet pack was used, probably, in part at least, because of the physiological action of the cooled blood upon the nervous centres and arterial walls, as well as, after smart rubbing with cold water, the tonic, reflex effect of the sensitive irritation which this process, like the douche, excites, being superadded to the effect of the vascularization of the skin. Under the douche, as well as to a certain extent under the other applications, alternate contractions and dilatations were induced, which, it is believed, must have the effect of pumping the lymph in and out of the lymph-spaces existing throughout the brain, and thereby of furthering the nutritive changes in the nerve-elements. Many and important practical inferences and cautions are finally drawn, sometimes, it seems to us, in a too sanguine spirit; a few of these are summarized as follows:—

“In the practical use of the different applications, attention is to be paid, not only to the above-mentioned physiological indications, but also to the power of endurance of the individual, and the condition of his various organs.

“The applications may be expected to be of service in cerebral disorders of the following general kinds: (1) anæmia; (2) hyperæmia, arterial and venous; (3) mental exhaustion; (4) nervous sleeplessness; (5) febrile sleeplessness.

“For insanity in general, no systematical hydropathic treatment is of avail; but against certain special symptoms it may often be used to advantage.”

REPORT OF THE PENNSYLVANIA HOSPITAL FOR THE
INSANE, 1875.

DR. KIRKBRIDE's reports reflect the opinions and experience of one of the oldest and ablest superintendents in the country, whose writings claim a respectful attention abroad. His position for many years as the head of the first established hospital for the insane in the United States, and as ex-president of the association of superintendents, entitles him to speak with authority concerning the standard of treatment in American hospitals. On this point particularly we will examine the report, as the usual statistics were given in a recent letter to the JOURNAL from its Philadelphia correspondent.

Some very severe and unjust strictures upon our treatment of the insane have recently appeared in *The Lancet*,¹ which were well answered in the JOURNAL for December 9, 1875. A short editorial in *The Lancet*² repeats a certain instance of abuse as having occurred in some county asylum, that is, in the insane department of some almshouse, and makes general charges of neglect against the large hospitals of New York and Philadelphia. Whatever may or may not be true of certain overcrowded pauper asylums under political influence and management, nothing to the discredit of the Pennsylvania Hospital should be inferred.

Let us glance at a few facts concerning this hospital. The recoveries in 6748 cases have been fifty per cent., which is a very favorable showing. The current expenses for 1875, with an average of 431 patients, amounted to over \$200,000. The medical staff consists of six physicians, and is therefore fully adequate to the care of the number under treatment. Every evening of the week for nine months, and every other evening during the remaining three months of the year, some form of entertainment is provided in which a large part of the patients participate. Every feasible kind of game or apparatus, or facility for exercise, amusement, and occupation, is afforded, and a constant warfare is maintained against the inertia and ennui engendered by disease or the necessary seclusion of hospital-life. A recent attempt in this direction is somewhat novel, though it may be claimed at sight by some progressive English superintendent. It consists in the establishment of a cooking school and a school for fancy wood-sawing and turning, for printing, and other light mechanical employments for the female patients. A special kitchen and a work-room have been fitted up for these purposes and are in successful operation.

As Fairmount Park is but ten minutes' ride from the hospital, the patients have had the privilege of daily inspecting the progress of affairs on the centennial grounds, and are hoping to profit still more by the great exhibition itself. This statement introduces a brief retrospect of the condition of the insane in the United States during the last hundred years. The first regular provision for the "care and cure of the insane" was made in 1751 by the Provincial Assembly which incorporated the Pennsylvania Hospital, and provided that it should maintain an insane department. The first patient was admitted in February, 1752, and the department has since grown to what we find it in Dr.

¹ Vol. ii., 1875, No. xx.

² February 12, 1875.

Kirkbride's charge to-day. There are now seventy-six hospitals in the United States, which will accommodate, when finished, twenty-nine thousand patients.

In reviewing the progress of a hundred years, Dr. Kirkbride declines to present the details of the former neglected condition of the insane for the sake of a startling contrast. This stale custom has been abused. The deleterious effects of the study of early accounts of this sort is seen in the outrageous exaggerations and misstatements of public speakers and writers of fiction, and now and then in errors of a professional publication like *The Lancet*. It has led many to believe that whatever once was now is, and to rely on antiquated sources of information instead of making a personal examination and study of what is now being done for the insane. The quiet but powerful influence of the association of superintendents is alluded to; its first published propositions, in regard to hospital construction and management of the insane having nearly all stood the test of twenty-five years. *The American Journal of Insanity*, which contains a mine of valuable literature in this department, was the first quarterly of the kind in the English language, and still maintains an honorable position among its descendants.

We can only notice further Dr. Kirkbride's statement of the views and practice prevalent in this country in regard to mechanical restraints; and first let us say that we differ from our English brethren through no lack of early or thorough consideration of the question. The occasional use of such restraint in our hospitals is not a "relic of barbarism," but a practice justified, as is universally claimed and believed, by the highest sense of duty and humanity. "The rule in this country," says the report, "is that mechanical restraint only of the mildest kind is ever to be used, that it is very rarely required under any circumstances, and that when used it is to be under the direction of the highest authority in the hospital only, and limited to the very shortest periods. . . . While of an hundred patients ninety and nine may present no reason for the use of mechanical restraint, the fact that it may save life and prevent suffering in the hundredth is deemed sufficient to keep us from insisting on its entire rejection. . . . It is certain that the records recently made by the highest official authorities in England and Scotland show an aggregate of accidents and injuries, including loss of life, and of kinds and varieties rarely known here, which will hardly tempt us to allow any such absolute rule to take the place of a wise and humane study of the necessities of each particular case. . . . Windows without guards and doors without locks may anywhere be adopted if we choose to do so and take the consequences, but the unnecessary loss of even a single life, or the permanent maiming of one person, which sooner or later is sure to occur from such a course, will be sufficient to make the thoughtful ask whether enough has been gained by this plan to counterbalance the painful occurrences which must frequently result from it."

The fact is that the large proportion of private asylums kept for gain, sometimes by unprofessional persons, in England, until very recently gave opportunities for abuses and neglect never afforded by our public hospitals with their various forms of inspection and supervision. The writings of Charles Reade, and other exaggerated and sensational publications, helped to arouse such a state of public feeling that many superintendents were forced, against their

better judgment, to adopt the rule of absolute non-restraint. Some, making a virtue of necessity, have insisted that this strict rule is the perfection of wisdom and humanity. When public opinion shall have so hampered and restricted our superintendents, our surgeons must look to the same authority for rules to govern the application of splints and the performance of amputations, and our hospital physicians for permission to restrain the exhausting violence of delirium tremens or typho-mania.

T. W. F.

FOX'S ATLAS OF SKIN DISEASES.¹

PICTURES of skin diseases may serve two purposes: one of assisting in diagnosis the practitioner who has not had sufficient opportunity to educate his eye by the study of cases, the other of furnishing additional means of illustration to those engaged in teaching. In either case they should be in harmony with the state of dermatology at the time of their publication, representations in color of the surface appearances described in contemporary text-books. Otherwise they may hold the same position to the study of dermatology as a terrestrial atlas of the past century bears to the geography taught to-day.

It is to be feared that some such objection as this may fairly be made to this publication. It is intended to be a reproduction of "the classical work of Willan and Bateman, but completely remodeled, so as to represent fully the dermatology of the present day." This would be a difficult task to accomplish, and even so ready a dermatologist as Dr. Fox has found it so to be. Such attempts to mix new and old can scarcely fail to be unsatisfactory. There was little need of reproducing the old atlas of Willan and Bateman, but an entirely new series of portraits of skin diseases by Dr. Fox could not fail to be valuable and interesting. It is greatly to be regretted, therefore, that he has not made the atlas more closely a book of illustrations to his own well-known work on skin diseases.

As it is, he has, in reproducing the plates of Willan, felt obliged to adhere to the names used by the latter, and to explain in the accompanying descriptions that the annexed titles are wrong in many cases, and that the picture really represents an affection which belongs properly to some other class of diseases. He gives, for instance, in Part II., plates of five kinds of strophulus, an affection of no well-recognized individual standing, and then explains in the accompanying text that the strophulus albidus is properly milium, a disorder of the sebaceous glands, the affections of which are to be illustrated in Part XV., and that strophulus candidus and strophulus volaticus are also misnomers, and are phases of urticaria. What is gained by thus perpetuating names founded on error?

Three parts have thus far been issued, the first illustrating the erythemata and urticaria; the second the varieties of strophulus and roseola; and the third seven kinds of lichen (?). It is proposed to complete the work in seventeen or eighteen monthly parts. The plates are in large folio form, printed by the

¹ *Atlas of Skin Diseases, consisting of a Series of Colored Illustrations, together with Descriptive Text and Notes upon Treatment.* By TILBURY FOX, M. D., London. Philadelphia: Lindsay and Blakiston. 1876.

chromo-lithographic process, and are fair representations of disease. The descriptive text by Dr. Fox is brief but good. He adheres to the views of classification and nomenclature so familiar to readers of his books, which it is not our present purpose to criticise. The work will form a valuable addition to the library of the practitioner, notwithstanding the objections offered above.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

F. B. GREENOUGH, M. D., SECRETARY.

FEBRUARY 28, 1876. *Excision of the Elbow-Joint by a New Method; Death from Multiple Embolism.* — DR. H. J. BIGELOW reported the case. The patient, a delicate-looking woman, entered the Massachusetts General Hospital for disease of the elbow-joint. She was a confirmed morphine eater, taking from one to two grains daily. The history of the case was that some time previously to her admission to the hospital she had struck her elbow; a swelling resulting from this injury was laid open by a physician, with the result of getting nothing but a little blood. Caries of the joint was found when she entered the hospital, and for this the joint was excised.

The patient did not do well, although she did not complain of pain. On the second day she became unconscious; she rallied, however, for a short time, but then became again unconscious, and died on the third day. She had had some palpitation of the heart, but she took her ether very well during the operation. She had a severe rheumatic attack fifteen years ago.

Dr. Bigelow made a few remarks in connection with the operation in this case. The modern and doubtless the best operation for removal of the elbow is that which avoids any transverse incision, the disadvantage of which is that it cuts across the muscles and fascia uniting the arm with the fore-arm. It is better to preserve this connection as far as possible, and the central longitudinal incision, originally suggested by Park, permits this. In the usual operation, also, the lower end of the shaft of the humerus, with its condyles, is sawed off. It had occurred to Dr. Bigelow that if, as in the present case, the condyles were not diseased, and could be safely left, and only the articulating surface of the humerus removed, the muscles attached to these condyles would remain undisturbed. The condition of the arm after operation would then approximate more nearly that of a case of excision described and figured by himself,¹ wherein he had been able to strip the periosteum from the condyles without disturbing the muscles. The result was that the periosteum reproduced the condyles for muscular attachments, the flattened extremity of the humerus somewhat resembling a closed fist with the fore-finger and little finger extended.

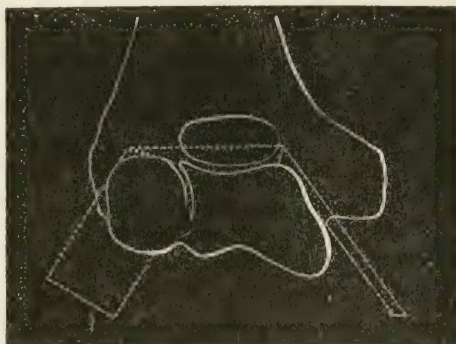
This was imitated in the present case by an operation as follows. After the median incision was made and the ulna cleaned, this bone was sawed partly through, about an inch and a half from the olecranon, and the section com-

¹ Ununited Fracture successfully treated, with Remarks upon the Operation. Periosteal Reproduction of the Condyles of the Humerus after Excision of the Elbow-Joint. By Henry J. Bigelow, M. D., Professor of Surgery in the Medical School of Harvard University. Boston Medical and Surgical Journal, May 30, 1867.

pleted with forceps. The fragment being removed, the humerus could now be dislocated backward. The ulnar nerve was next drawn a little to one side, and the humerus sawed from the bed of this nerve obliquely into the olecranon depression, and similarly on the outside from the external condyle into the same depression.

The whole articulating surface was now readily broken out, leaving the condyles. The orbicular and lateral ligaments being now divided, the fore-arm was dislocated backwards, the radial extremity sawed off, and a few remaining points chipped out with gouge-forceps.

The result seemed an excellent one, and the wound was promising well, when the patient died from widely-diffused embolism.



In the accompanying figure, the dotted lines show the planes of section. By an oblique section of the outer condyle, more bone can be left behind than in front.

DR. FITZ showed the specimens. He said that they were of additional interest, as the history of the case showed that the embolism must have taken place within the three days preceding the patient's death. The left auricle contained a thrombus, softened in the centre, of the volume of the fore-finger, and half as long; it was attached near the auriculo-ventricular septum. The pericardium covering the auricle was firmly united by fibrous adhesions to the corresponding parietal layer.

The curtains of the mitral valve were thickened and calcified, the orifice barely admitting the tip of the little finger. The right ventricle was hypertrophied and dilated moderately, and contained several small, decolorized globular thrombi.

In the right middle cerebral artery, half an inch from its origin, was a recent thrombus completely obstructing the vessel. The island of Reil and the corpus striatum on this side were of exceedingly soft consistence, the color not materially differing from the normal. The rest of the brain showed nothing abnormal.

In the left primary pulmonary artery was an adherent, decolorized, moderately firm clot, not completely obstructing the vessel. The greater part of the upper lobe of the lung on this side was contracted and thickened, containing a large cavity filled with moderately inspissated puriform material. The secondary bronchus proceeding to this region was obliterated; its shape and size were fairly preserved, but its canal was filled with a loose fibrous tissue. In the posterior portion of the right lung were a few recent nodules of hæmorrhagic infarction.

At least one third of the left kidney presented a red and yellow opaque appearance, in which tubes were recognized with difficulty; the primary branch

of the renal artery leading to this region was found to be filled with a recent clot. The right kidney contained several wedge-shaped masses of fibrous tissue, depressed below the surface and extending towards the pelvis.

The orifice of the left common iliac artery was completely obstructed by a decolorized embolus, from which a thrombus was continued downward into the femoral and internal iliac.

The left leg was considerably swollen, and the foot livid in patches, particularly on the sole.

The wound of the elbow presented no abnormal appearances, nor was there any evidence of extensive thrombosis of the veins in its vicinity.

Relaxation of the Ligaments of the Pelvis during Pregnancy. — DR. JACKSON showed the skeleton of a guinea-pig that he had recently prepared, in which the pubic bones were separated to the extent of from three fourths to seven eighths of an inch, the sacro-iliac articulations also being much relaxed. The animal had been drowned immediately after labor.

Dr. Jackson remarked that too little is said by physiologists and obstetricians upon this interesting subject of relaxation. By some it is regarded as very exceptional, and by others as common. Dr. Eugène Dupuy had recently informed Dr. Jackson that M. Budin, who was for four years an interne at the Maternité in Paris, was in the habit of examining every pregnant woman in the hospital, and always found relaxation; placing the finger upon the inner surface of the symphysis pubis, he found that movements of the body would prove the fact. These observations, Dr. Dupuy stated, were published in the *Comptes Rendus* of the Biological Society of Paris during the past year.

In a considerable number of cases that Dr. Jackson had examined post mortem, there had sometimes been no relaxation whatever, even at the full period; and when it did exist it varied much in degree. In the most marked cases the pubic bones could be moved upon each other, so that the anterior edge of one could be brought almost if not exactly into a line with the posterior edge of the other, the bones nearly overlapping. A preparation from the college museum, on the other hand, was then shown, in which there was no relaxation; the woman died of peritonitis at the full period of gestation, but before labor had commenced.

Where there is a great disproportion between the size of the pelvis and that of the young, we should expect, said Dr. Jackson, to find relaxation. The guinea-pig is large at birth, and may be said to have already arrived at the period of adult life, Dr. Brown-Séquard having observed that it would take solid food and even procreate its species from the day of its birth. Dr. Jackson showed the dried pelvis of a guinea-pig from the society's collection; the animal died of acute disease some time before the full period of gestation, but the pubic bones were already widely separated. The pelvis of a mouse was also shown, with the bones far apart, although gestation was not completed. As it might seem that rodents are especially liable to this relaxation, Dr. Jackson had examined a rat not long ago. The animal was drowned as soon as the young were expelled, but there was no relaxation whatever of any of the pelvic articulations.

At what period of pregnancy relaxation commences Dr. Jackson could not

say ; but he had once found it quite marked in a woman who died of apoplexy at the sixth month.

Diseased Testicle. — DR. JACKSON showed the specimen, which he had received from Dr. Pineo, of Hyannis, who had recently removed it. The patient was a healthy man, fifty years of age. The disease was of two years' duration, and painless ; its cause was unknown.

The organ was much enlarged, of a regular, ovoid form, and measured, on the bisected surface, five and one fourth inches in length, and three and one fourth inches transversely. The structure was quite unusual, and differed much from any of the common forms of diseased testicle, there being nowhere, to the naked eye, any trace of the natural tissue in the body of the organ. The upper and larger portion was yellowish, opaque, curdy, and partially broken down, with some intermixture of fibrous tissue. The remainder was somewhat dense, and evidently contained much fibrous tissue, and upon the bisected surface were four or five little cyst-like cavities, varying from the size of a turnip-seed to that of a small pea ; but upon other sections of the organ these last were not found. There was also upon the back of the organ a defined mass, of some size, which to a considerable extent was cartilaginous in structure. The two portions of the organ were defined transversely with remarkable regularity, and almost to a line ; and in the lower portion there was no trace of the opaque material of which the upper almost wholly consisted. The epididymis and vas deferens appeared to be quite healthy. The investing membrane was thickened, and beneath the external surface were seen numerous greatly dilated and tortuous veins.

MARCH 13, 1876. *Adherent Pericardium of long Standing without Symptoms ; Death apparently from Cholemia.* — DR. MINOT reported the case. The patient was a lady, over eighty-four years old, who had always enjoyed good health during the recollection of her children, and was active for one of her years. During the early part of the last winter she had two or three attacks of jaundice, with pain referred to the back, but not severe. On Sunday, March 5th, she was down-stairs at breakfast and dinner, eating heartily, as was her wont. In the afternoon she had some pain in the back, followed by jaundice ; the latter increased, and became intense the next day (Monday) ; on Tuesday she began to grow somnolent, and she died Wednesday forenoon, free from delirium or coma, although drowsy. She sat up in bed and drank champagne from a glass which she held in her own hand a few hours before her death. The pain was never severe, and was easily quieted by small doses of paregoric. There had never been any heart symptoms, nor the history of any acute disease, so far as her family knew.

DR. FITZ, who made the autopsy, showed the gall-bladder, with the cystic and common bile ducts. The duodenal portion of the latter was distended by a round calculus, nearly three quarters of an inch in diameter, thus forming an elevated tumor projecting into the cavity of the intestine. The cystic duct was widely dilated and its wall was thickened. The gall-bladder presented no abnormal appearances, and contained a considerable amount of dark, viscid bile. The pancreatic ducts were stained with biliary coloring matter.

The various organs and tissues of the body were of a diffused yellow color, and bile escaped from the smaller ducts within the liver.

A moderate degree of chronic interstitial hepatitis was present, and the liver-cells were abnormally granular. The latter change was very marked in the renal epithelium, and hyaline casts and leucine were found in the kidneys.

The pericardial cavity was entirely obliterated by old fibrous adhesions. The walls and cavities of the heart were normal. Several small calcified nodules were observed on the lower surface of the mitral valve. The lungs were œdematous behind, and a limited portion was collapsed. The brain was not examined.

THE INTERNATIONAL MEDICAL CONGRESS.

THE mystery which has hitherto enshrouded the proceedings of the committee of arrangements of the centennial medical commission has finally been cleared away by the appearance of a preliminary programme containing an outline of the exercises which are to be held in Philadelphia during the first week of September next. A glance at the list will serve to convey some idea of the labors of the members of this committee during the past months, and also the necessity for the discreet silence which has thus far been preserved.

The chief business of the general meetings will be to listen to addresses on the various departments of medicine (we feel greatly relieved to find that there are to be no "orations"). The gentlemen who have been selected for this work represent very fairly the different sections of the country. Our western cities come in for a large share of the honors, and on this occasion will certainly have no cause to complain. We have no doubt that their representatives will reflect great credit upon them. We think it a matter of regret that Philadelphia has seen fit not to be represented upon the list. Surely such a programme could hardly be considered to display a fair sample of the profession of this country when the fountain-head of medicine has been omitted. It would also be most appropriate to give prominence in the congress to the city which entertains its members; moreover, we can ill afford to do without the services of so brilliant a constellation of stars as is to be found in that city. The selection of Dr. Austin Flint of New York for the address on medicine, of Dr. N. S. Davis of Chicago for an address on our medical institutions, and of Dr. Chaillé of New Orleans for the address on medical jurisprudence seem to us particularly happy, to say nothing of our distinguished home representative, Dr. Bowditch.

In the section work we find our eastern cities somewhat more prominent, but, what is of more importance for the success of the meetings, the various departments of science are well filled. The plan of the committee has been to assign subjects for discussion to each department, the debate to be opened by reporters appointed for the purpose, whose names appear in the programme, as will be seen by reference to another column. In order that these debates may be full and satisfactory, outlines of the reports will be given in the course of the spring.

We learn from this document but little of what part our foreign guests are going to take in the congress: were it not for the solitary announcement of an

address by Professor Hermann Lebert, of Breslau, we should have supposed that this feature of the programme had not been yet announced. The delay necessarily caused by correspondence carried on at great distances is doubtless sufficient reason for this lack of a foreign element, without which the congress could hardly lay claim to its title. It is not probable that this meeting will be so truly international in character as those which are yearly held in Europe; our isolated position places us at a disadvantage in this respect. Our colleagues, the ophthalmologists, have made extensive arrangements for their meeting in New York, and there is, we understand, every prospect of a large foreign attendance. We can but believe that the Philadelphia committee is equally able to accomplish its task. The energy which it has displayed in presenting so full and early an announcement gives us reason to hope that this feature will not be neglected, and that the congress will be numbered among the successful experiments of our centennial gathering at Philadelphia.

TYPHOID FEVER AND POLLUTED MILK.

OUR recent English exchanges bring us the details of an extensive and serious epidemic of enteric fever whose cause has been traced to milk contaminated with sewage. The outbreak occurred at Eagley, a village in Lancashire. More than two hundred persons were attacked, and of these, fifteen died. The outbreak was sudden, and the symptoms were unmistakably those of enteric fever.

Upon investigation it was found that all those attacked derived their milk from a single dairy farm. In the houses where this milk was used the disease was very general, and whole families were prostrated in some cases; whereas in adjoining houses, where this milk was not used, there was complete immunity. Again, the disease appears to have selected in certain families those who were specially drinkers of milk.

With regard to the milk itself, it has been ascertained that it was of poor quality, and there is strong evidence that it was contaminated by water impregnated by "fæcal putridities." Mr. Robinson, the resident medical officer of health, has made a careful investigation of the facts connected with the outbreak, and his conclusions are, "First, that the milk from the suspected farm was the vehicle in which the fever-poison was conveyed to all the individuals attacked; and, secondly, that the poison was introduced into the milk either by the adulteration of it with water containing fæcal matter or the germs of typhoid fever, or by washing the dairy utensils and milk-cans in water contaminated in like manner." No evidence was found, however, that water was purposely added to the milk, but it was ascertained that the utensils of the dairy were washed with water derived from a stream which was so polluted by fæcal matter as to be little better than a sewer. The question whether the water owed its virulent properties to fæcal matters in a certain stage of decomposition or to typhoid dejections infecting the stream is still undecided. The water supply of the village had no connection with the polluted stream, but was found on analysis to be pure and wholesome.

This, the latest and in some respects the most striking of the series of fever

epidemics which have been traced to infection of the milk-supply, bids fair to lead to uniform and systematic sanitary supervision of English dairy farms. The need of such precautions is as urgent in New England as it is elsewhere. In innumerable instances the water supply of farms is from surface wells so situated as to be polluted very readily by human excreta. In such cases, the contamination of wells may at any moment become a source of disease. It would be an interesting subject for investigation to inquire how far this polluted water, finding its way into milk, affects the health and lives of people remote from the source of the contamination. For example, is it not possible that a portion of the two thousand cases of enteric fever which annually occur in Boston owe their origin to the country milk, supplied as it is from the most varied sources? Certainly the cases occurring among those who reside permanently in the city, and whose water-supply is Lake Cochituate, would offer legitimate material for such an inquiry.

THE MECHANISM OF FORCEPS DELIVERY.

In a paper published in the *Edinburgh Medical Journal* for February, 1876, Dr. J. Matthews Duncan protests against the pendulum movement in working the midwifery forceps. Reference is made only to the pendulum movement from side to side, the only one, so far as Dr. Duncan knows, recommended in recent times. The pendulum movement in a sagittal direction, as recommended by the early describers of the forceps operation, is still more open to objections than the former. In describing or defending the pendulum movement, two great points are made: first, that it is analogous to, or identical with, that of a lever and double rack; and, second, that by resorting to it there is an economy of force. Regarding the first hypothesis, it may be said that there is no toothed rack on the wall of the pelvis, nor any roughness to take the place of such a rack. Further, there are no teeth or roughness on the foetal head to fit into the teeth of the supposed rack. Pulling the head down at one side, and then at the other, and so advancing, is merely an injuriously complicated way of producing simple progress. The second hypothesis, that there is any saving of force so far as pressure on the mother's and child's parts is concerned, by resort to the pendulum movement, involves an absurdity. A certain amount of work has to be done; the head has to be advanced against resistance that must be overpowered if the effort is successful. Direct, uncomplicated traction does the work in the simplest way, and no complication of it by pendulum or other movement can diminish the amount of work expended below that required by simple traction. The pendulum movement necessarily involves an injurious amount of pressure, and consequent friction between the parts of the head to which the blades of the forceps are applied and the adjacent maternal structures. Usually this friction is so slight as to be of little moment. But in some cases when the resistance to progress arises from tight and undilatable soft parts, it may be very injurious. In the most important forceps cases, where the obstacle to progress arises from hard parts, the head has to be slowly dragged and perhaps

molded between the promontory of the sacrum and the pubic bones. In such cases the pendulum movement involves special evils and dangers ; for by it there is necessarily produced, besides the trivial friction, which is most extensive at the points where the blades are applied, a violent and powerful squeezing of the soft parts between the head and the opposing pelvic bones on which the head works. If, for the carrying out of the pendulum movement, the forceps is made to compress the head so strongly as not to slip on it, then the points of the instrument, and especially the point of that blade which is on the side of the head towards which the movement is given, will exert a powerful and undesirable amount of pressure on the parts of the child's head or face which they touch. If, on the other hand, the blades do not press the head so tightly as to obviate a to-and-fro motion of them on the head, then the scalp will be liable to be much injured, and its surface abraded. There is in the mechanism of delivery, whether natural or morbid, nothing analogous to this artificially produced oscillating or pendulum movement. The use of the forceps is to contribute by artificial pulling to the strength of the natural expulsive efforts, which push. To this traction, judiciously applied, the practitioner should confine himself. The oscillatory movement will contribute nothing to the forward traction, and it is the forward traction which alone is desirable.

MEDICAL NOTES.

—The Transactions of the Medical Society of the County of Erie, N. Y., contains a report of the fifty-fifth annual meeting, in January, 1876. The address of the president, Dr. John Cronyn, urges the necessity of a high standard of literary culture on the part of those who are to study medicine; of the raising of the standard of medical education in the schools; and of examinations so rigid as to leave no doubt of the fitness of those who pass them to practice medicine. A report is also given from the "primary board," which examines candidates for the study of medicine and gives certificates to such as are deemed to possess a proper preliminary education therefor. The pamphlet contains an essay by Dr. Howe on the operation of tattooing the cornea.

—The volume of Transactions of the Colorado Medical Society at its third and fourth annual sessions, June, 1874, and June, 1875, shows that the society is composed of members who are active, though not numerous. Papers are published on blood-letting, phthisis, gynecology, and climatology. As Colorado is one of the popular health resorts at the present time, particularly for those suffering from pulmonary diseases, it is somewhat interesting to read the report on climatology made by Dr. T. E. Massey, of Denver. He writes that it is doubtless true "that to healthy men and women the climate of Colorado contributes *nothing*, save passing variety and exhilaration. That it is promotive of average longevity is more than questionable. . . . The wrinkled skin of middle-aged men, and the tallow-faces of youngish maids and matrons, are most significant that the *drying process* of this elevated region is promotive of neither longevity nor beauty. If consumptives, asthmatics, and miasmatics flourish and

apparently get a longer lease of life, that fact admitted does not prove that those of healthy genesis would not live longer elsewhere. . . . The peculiarities of a climate that apparently protracts the days of a consumptive seem to be precisely those that prematurely *age* the generally healthy." Dr. Massey claims that in all disorders of malarial origin the benefits of the air of Colorado are much more marked than in consumption.

— In the annual report of the Surgeon-General of Massachusetts we find some useful hints in regard to sanitary measures to be taken at the camping grounds of the State at South Framingham. It is urged that before any expenditure for ornamentation is made, a purer supply of water should be provided for by placing concrete pavements about each well, thus preventing the absorption of deleterious matter, which in the opinion of some of the medical officers is one of the causes of the frequency of diarrhœa. A suitable receptacle should also be provided, of sufficient capacity to receive the garbage of the several encampments, the contents of which should be put to the same use as that from the sinks, in fertilizing the grounds. There were not a few complaints made last year as to the cleanliness of the camp, and this evil could be readily abated and the sanitary condition of the camps much improved if some officers would pay less attention to medical politics and give more energetic support to the recommendations of the medical staff.

— The report of the board of managers and superintendent of the State Lunatic Asylum of Texas, for the fiscal year 1875, shows that there remained in the hospital at the opening of the year one hundred and twenty-seven patients; during the year there were admitted ninety; discharged, restored thirty-three, improved nineteen, incurable two; two escaped, and nine died; there were remaining, September 30, 1875, one hundred and fifty-two. Dr. D. R. Wallace, in his report as superintendent, says it is much to be regretted that, as a rule, the insane are not placed under hospital treatment as promptly in Texas as in the older States, and consequently complete restoration to health, if attainable, requires a much longer time than would be needed if the patients were sent earlier to the asylum. He earnestly combats the popular notion of the spiritual and functional character of mental derangement, and holds that it is a purely bodily disease, having as organic lesions changes in the condition of the brain or its membranes. "Grappled at once, as soon as its fell presence is recognized [it] is of all grave maladies one of the most curable." As a therapeutic agent, the chloride of ammonium is largely used in the Texas asylum. The statement is made that the persevering use of the drug has been attended with the happiest results, and has been credited with being instrumental in restoring to health several cases regarded as hopelessly incurable.

— The committee who have in charge the preparation of a suitable memorial to the late Dr. Samuel Gridley Howe, the philanthropist and peculiar friend of the blind, propose to procure a fund for the purpose of printing in raised type a short memoir of their earnest friend and benefactor, for gratuitous distribution to such blind persons as cannot afford the expense of a copy.

For this purpose the committee ask all friends of the blind, as well as those of Dr. Howe, to contribute such sums as they may see fit.

Should the amount contributed exceed the expense of printing the memoir

in raised type, the balance will be set aside to form a nucleus of a fund to be called "The Howe Printing Fund," at our Institution for the Blind.

Such a fund is very much needed, as the institution has no money for printing purposes, and since its foundation has been able to print for the blind about thirty different works only, comprised in forty-seven volumes, which confines our pupils and the educated blind to a very narrow range of literature.

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CLINIC.

[SERVICE OF S. CABOT, M. D.]

Stricture of the Urethra. — CASE I. H. B. W., aged forty-two, entered the hospital December 15th. For the past six years he has suffered from a stricture of the urethra, which followed repeated attacks of gonorrhœa. He was in the hospital last April, when he was treated by gradual dilatation, and was discharged with a good-sized urethra, and directed to continue the use of a bougie. This he did for two or three weeks, but then failed to pass the instrument, and has since been unable to do so. His stream of urine has steadily decreased in size, and is now very small and forked. A large sound is arrested about three inches from the meatus.

December 18th. An attempt was made to pass a bougie-guide to a Voillemier's dilator. This passed the first stricture successfully, but was arrested by a second one in the neighborhood of the membranous urethra. A Holt's dilator met with a like obstruction, and the effort was abandoned. That afternoon the patient had a slight chill, and another on the following morning, but there were no other serious symptoms.

December 22d. A Voillemier's bougie-director passed easily into the bladder and was tied in. The patient was then etherized, the dilator passed, and the strictures ruptured. A large-sized soft-rubber catheter was tied in.

On the following day the patient was quite comfortable, with no chill or other unpleasant symptom.

December 27th. There being some urethritis, the catheter was removed. From this time the man made a good recovery, his only trouble being from chordee at night, which was relieved by lupulin and bromide of potash.

January 13th. The urethra admitted a No. 23 French bougie, and the patient was discharged, with directions to pass an instrument from time to time.

CASE II. T. G. O., aged thirty-four, entered December 30th. He has had gonorrhœa several times. In 1861, after an obstinate attack, he noticed his stream becoming progressively smaller; at times it would stop entirely, when he would thrust pieces of wood into the urethra till they were stopped by the stricture. This proceeding usually relieved the retention. Eighteen months ago a urinary abscess formed and broke, leaving several fistulous openings through the upper part of the scrotum, which became and still continues much swollen. About one half of the urine now passes through the fistulæ. As in the last case, there are two strictures, one about three inches from the meatus and one just in front of the prostate. Small bougies pass the anterior stricture quite easily, but are always arrested at the posterior one.

January 20th. A No. 10 French bougie was passed into the bladder.

January 22d. The Voillemier's guide was passed and tied in. The patient was then etherized and the stricture divulsed. A No. 23 soft-rubber catheter was left in. At night the patient had a good deal of pain of a straining character, which was relieved by a suppository containing a quarter of a grain of extract of belladonna and a grain of opium.

January 24th. There was some discharge of pus from the fistulæ, and the scrotum was quite hard and tender. This condition quickly subsided under a poultice.

January 28th. The catheter was removed, and the patient was able to pass a good stream.

February 2d. A slight cellulitis of the scrotum again appeared, but was soon relieved by warm fomentations. After this the fistulæ rapidly closed, the urine all passing by the urethra.

February 25th. One very small opening alone remained, and the patient was discharged at his own request.

Cystitis. — CASE I. H. H., aged fifty; entered November 12th. For the past five years he has been troubled with pain in the perinæum, over the pubes, and at the end of the penis. At times he has had retention requiring catheterization. He is annoyed by a constant desire to micturate, and can hold his water for two hours only at a time. Upon examination no calculus is found. The prostate is somewhat enlarged. Urine contains considerable pus, but is otherwise normal. Ordered the following three times daily: —

R̄ Potassæ citratis	grs. xv.
Infusi buchu	3 ij.

His bladder is washed out morning and night, through a double current catheter, with warm water followed by infusion of buchu, one-half strength.

November 14th. The urine is much clearer. The patient has but little pain, and can hold his water twice as long as at the time of entrance.

November 18th. The patient micturates no oftener than he did when in health. When the catheter is used immediately after urination, about an ounce of residual urine is found.

From this time the pus gradually disappeared from the urine, and the bladder regained its power of entirely emptying itself. The pain was entirely relieved.

November 29th. Examination shows that the urine first passed contains a few shreds of pus, that passing afterwards being clear. The prostate is still enlarged. The patient is discharged, with directions to inject about two ounces of Sir Henry Thompson's solution morning and night, leaving it in the bladder.

CASE II. W. W., aged sixty-nine, entered December 3d. Ten months ago complete retention of urine came on suddenly. This was relieved at the time by the catheter. For nine months the catheter was used once a day. For the past month the patient has had no treatment; he has been troubled by frequent micturition (as often as once an hour), and has constant dull pain in the perinæum and frequently pain of a bearing-down character over the pubes. The

prostate is somewhat enlarged. No stone is discovered. The urine contains considerable pus. The catheter, passed immediately after micturition, procures about four ounces of residual urine.

December 4th. The bladder is washed out twice a day with warm water, followed by infusion of buchu in two parts of water.

December 6th. The bladder, after being washed out with infusion of buchu (one-third strength), is injected with Sir Henry Thompson's solution of carbolic acid, three or four ounces of which are left in the bladder.

December 8th. The patient urinated only five times in the night. There is much less pain.

December 13th. The bladder still being unable to empty itself, the patient was instructed to use a soft-rubber catheter whenever he felt a desire to micturate, and after emptying the bladder to inject a small quantity of Sir Henry Thompson's solution. He required the use of the catheter five times only in the twenty-four hours. At this time the injections with infusion of buchu were stopped. The urine contains very little pus, and the pain is almost wholly relieved.

January 6th. There is a slight return of pain, which is relieved by resuming the injections of infusion of buchu.

January 21st. The patient is discharged, entirely relieved of his acute symptoms, but still requiring the use of the catheter to prevent an accumulation of urine in the bladder, which no doubt formed a considerable pouch behind the prostate.

A. T. CABOT.

LETTER FROM PHILADELPHIA.

MESSRS. EDITORS,—The "preliminary programme" of the International Medical Congress has just been issued in the form of a circular. It announces that at the general meetings of the congress addresses will be delivered as follows: on medicine by Prof. Austin Flint, of New York; on hygiene and preventive medicine by Dr. Henry I. Bowditch, of Boston; on surgery by Prof. Paul F. Eve, of Nashville; on Obstetrics by Professor Theophilus Parvin, of Indiana; on medical chemistry and toxicology by Prof. Theodore G. Wormley, of Columbus, Ohio; on medical biography by J. M. Toner, M. D., of Washington, D. C.; on medical literature by Prof. Lunsford P. Yandell, of Louisville, Ky.; on medical education and medical institutions by Prof. Nathan S. Davis, of Chicago; on mental hygiene by John P. Gray, M. D., Superintendent of the State Lunatic Asylum, Utica, N. Y.; and on medical jurisprudence by Prof. Stanford E. Chaillé, of the University of Louisiana. Prof. Herman Lebert, of Breslau, Germany, will deliver an address on a subject not yet announced.

Discussions on scientific subjects will be opened in the sections on the following questions by the gentlemen named in connection therewith:

Section I, Medicine. (1.) Typho-malarial fever; is it a special type of fever? Dr. J. J. Woodward, United States Army. (2.) Are diphtheritic and pseudo-membranous croup identical or distinct affections? Dr. J. Lewis Smith, of New York. (3.) Do the conditions of modern life specially favor the development of nervous diseases? Prof. Roberts Bartholow, Medical College of

Ohio. (4.) 'The influence of high altitudes on the progress of phthisis. Dr. Charles Denison, of Denver, Col.

Section II., Biology. (1.) Microscopy of the blood. Prof. Christopher Johnston, University of Maryland. (2.) The excretory function of the liver. Prof. Austin Flint, Jr., of New York. (3.) Pathological histology of cancer. Prof. W. S. Arnold, of New York. (4.) Mechanism of joints. Prof. Harrison Allen, of Philadelphia.

Section III., Surgery. (1.) Antiseptic surgery. Prof. John T. Hodgen, of St. Louis. (2.) Medical and surgical treatment of aneurism. Prof. William H. Van Buren, of New York. (3.) Treatment of coxalgia. Prof. Lewis A. Sayre, of New York. (4.) The causes and geographical distributions of calculous diseases. Dr. Claudius H. Mastin, of Mobile, Alabama.

Section IV., Dermatology and Syphilology. (1.) Variations in type and in prevalence of diseases of the skin in different countries of equal civilization. Prof. James C. White, of Boston. (2.) Are eczema and psoriasis local diseases, or are they manifestations of constitutional disorders? Dr. Lucius Duncan Bulkley, of New York. (3.) The virus of venereal sores; its unity or duality. Prof. Freeman J. Bumstead, of New York. (4.) The treatment of syphilis, with special reference to the constitutional remedies appropriate to its various stages; the duration of their use and the question of their continuous or intermittent employment. Prof. E. L. Keyes, of New York.

Section V., Obstetrics. (1.) The causes and treatment of non-puerperal hæmorrhages of the womb. Prof. William H. Byford, of Chicago. (2.) The mechanism of natural and of artificial labor in narrow pelves. Prof. William Goodell, of Philadelphia. (3.) The treatment of fibroid tumors of the uterus. Dr. Washington L. Atlee, of Philadelphia. (4.) The nature, causes, and prevention of puerperal fever. Prof. William T. Lusk, of New York.

Section VI., Ophthalmology. (1.) The comparative value of caustics and astringents in the treatment of diseases of the conjunctiva and the best mode of applying them. Prof. Henry W. Williams, of Boston. (2.) Tumors of the optic nerve. Dr. Hermann Knapp, of New York. (3.) Orbital aneurismal disease and pulsating exophthalmia; their diagnosis and treatment. Prof. E. Williams, of Cincinnati. (4.) Are progressive myopia and posterior staphyloma due to hereditary predisposition, or can they be induced by defects of refraction acting through the influence of the ciliary muscle? Dr. E. G. Loring, of New York.

Section VII., Otology. (1.) Importance of treatment of aural diseases in their early stages, especially when arising from the exanthemata. Dr. Albert H. Buck, of New York. (2.) What is the best mode of uniform measurement of hearing? Dr. Clarence J. Blake, of Boston. (3.) In what percentage of cases do artificial drum-membranes prove of practical advantage? Dr. H. N. Spender, of St. Louis.

Section VIII., Sanitary Science. (1.) Disposal and utilization of sewage and refuse. Dr. John H. Rauch, of Chicago. (2.) Hospital construction and ventilation. Prof. Stephen Smith, of New York. (3.) The general subject of quarantine, with particular reference to cholera and yellow fever. Dr. J. M. Woodworth, United States Marine Hospital Service. (4.) The present

condition of the evidence concerning "disease-germs." Dr. Thomas E. Satterthwaite, of New York.

Section IX., Mental Diseases. (1.) Microscopical study of the brain. Dr. Walter H. Kempster, Hospital for the Insane, Oshkosh, Wis. (2.) Responsibility of the insane for criminal acts. Dr. Isaac Ray, of Philadelphia. (3.) Simulation of insanity by the insane. Dr. C. H. Hughes, of St. Louis. (4.) The best provision for the insane. Dr. C. H. Nichols, Superintendent of the Government Hospital for the Insane, Washington, D. C.

Gentlemen who intend to make communications upon scientific subjects, or to participate in any of the debates, are requested by the circular to notify the commission before the first of August, in order that places may be assigned them on the programme.

The circular also states that "in order to facilitate debate there will be published on or about June 1st outlines of the opening remarks by the several reporters." Copies may be obtained on application to the corresponding secretaries (whose names and addresses were mentioned in my letter published in your issue of January 6th). The following information, not heretofore published, is also given: "The volume of transactions will be published as soon as practicable after the adjournment of the congress." The public dinner of the congress will be given on Thursday, September 7th, at 6.30 P. M. The registration fee (not required from foreign members) has been fixed at ten dollars, and will entitle the member to a copy of the transactions of the congress.

Jaccoud, Secretary of the International Medical Congress in Paris, and Strohmeier (of Göttingen, I believe) will attend the congress. Funds are being raised in London for the purpose of erecting a bust of Strohmeier in celebration of his semi-centennial doctorate. Jaccoud of Paris, Schnitzler, secretary of the medical congress in Vienna, Virchow of Berlin, and one leading medical man in every prominent country in the world, some thirty or forty in all, have been requested to act as honorary local corresponding secretaries, and furnish the medical commission with lists of the principal medical societies in their respective countries which ought to be invited to send delegates to the congress. The committee on invitations have just sent personal invitations to the number of six hundred to the most distinguished medical men abroad.

The commission has issued a printed note which states that the time allotted for the reading of papers before the sections is limited to thirty minutes (a most sensible decision), and which requests that the heads of essays or of opening remarks be forwarded to the committee of arrangements before May 20th. It also requests a summing up, at the close of each paper, of the views embodied in it, by such conclusions or propositions as can be voted upon separately in the proper section and afterwards reported to the congress. A copy of this note will be addressed to each of the gentlemen who will open discussions in the sections. The congress will meet in the hall of the university buildings. For further details I will refer your readers to my letter in the *JOURNAL* of January 6th ult.

It pains me to tell you that Dr. John S. Parry, whose work on *Extra-Uterine Pregnancy* received such kindly notice in a recent number of the *JOURNAL*, died of consumption a few days ago in Florida. He was a genial, true-souled gentleman and a valuable member of the profession, and his death, which

to our human judgment seems sadly premature, is deeply regretted by his many warm friends.

The yearly commencements of the various medical schools of Philadelphia, which always take place in March, passed off successfully. The University Medical School graduated one hundred and twenty-four men (including one from Massachusetts), and distributed several prizes. Jefferson College gave diplomas to one hundred and forty-six graduates, and awarded seven valuable prizes. Prof. William H. Pancoast delivered an eloquent valedictory, and Dr. Addinell Hewson, on behalf of the alumni, presented the trustees of the college with a life-like, half-length portrait, in oil, of the late Professor Dunglison. On the previous evening Dr. J. M. Toner, of Washington, read a lecture before the Jefferson alumni upon The Medical Department and Surgeons of the Revolution. Dr. Toner had given years to the collection of statistics for this valuable and elaborate essay, and I trust it will soon be published. Every American physician should own a copy of it. The Women's Medical College conferred degrees upon twelve graduates. The valedictory was delivered by Prof. Emeline H. Cleveland, and included the following: "In seeking society-memberships you will not obtrude yourselves where your presence would be considered obnoxious. Your womanly delicacy would forbid. The time has arrived, however, when, if worthy and reputable as physicians, you may be admitted without objection to county and state organizations in some of the most enlightened of our communities. In Rhode Island, New York, Ohio, Michigan, Iowa, and California, women are members of important medical societies, in some even holding official positions. Whenever practicable you will ask admission to such organizations in your various localities as may be worthy of your membership. You will thus show to the profession your desire to conform to all ethical rules and to keep yourselves in position for constant growth."

The College of Pharmacy graduated one hundred and four men, and the Hahnemann Medical College fifty-seven. From the valedictory of Professor Farrington of the latter school I make the following extract: "Remain true to your cause. You cannot, while believing in a science (?) whose therapeutics are diametrically opposed to those of any other school, adopt an eclectic method in practice, pretending to sift the good from all, and thus live a deception, without misleading those who summon you as homœopathists. In a forensic sense, I believe you to be accountable before the law if after specializing your system you forsake it in actual practice and resort to other methods. And why not? Is he who buys and sells under false pretenses to be amenable to the law and you be allowed to traffic in men's lives and go unpunished? If you have not implicit confidence in your law of cure, renounce it publicly. This would have the merit of being at least manly." This is a cap which would fit many a homœopathic head.

The generous donation of five thousand dollars by Mrs. Mutter, widow of the late distinguished professor of surgery in Jefferson Medical College, will establish a "Mutter bed" in the hospital of the college now in process of erection.

In the women's pavilion at the Centennial Exhibition there will be displayed

a complete series of pharmaceutical preparations made exclusively by the Women's Medical College.

Jefferson College and the University Medical School will open their summer sessions during the coming week. The prospectus of each school includes a very full list of subjects, and all earnest students will find these courses interesting and instructive.

The examination of candidates for the position of resident physician at the Philadelphia Hospital took place last week. There are twelve annual vacancies at this hospital. The residents must be graduates (reversing the rule which is followed in Boston hospitals), and the candidates commonly offer themselves directly after graduation. This spring there were twenty-one candidates: ten from the university, seven from Jefferson, and four from other colleges. The medical board appointed three of their number as examiners, and the president announced that the same number and same kind of questions would be asked each applicant, and that the time given to each examination was not to exceed four minutes. After the examination, the names of the applicants with their averages attached are sent to the board of guardians of the poor, and the twelve who have the highest average are elected as resident physicians to the Philadelphia Hospital, which is in reality an almshouse institution.

A former druggist of this city, having amassed a fortune, determined to erect in one of the suburbs a mansion which should contain every possible comfort, and to which he would retire to enjoy his honest means during the remainder of his days. He had somehow heard that over the entrance to a retreat erected with similar intentions were the words "otium cum dignitate." He knew the English of this expressive phrase, but, as the sequel shows, was not so sure of the Latin, for over his door was painted, in brave array, "opium cum digitale."

X.

PHILADELPHIA, *March 21, 1876.*

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING MARCH 18, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week
New York	1,060,000	619	30
Philadelphia	800,000	402	26
Brooklyn	500,000	212	21
Boston	342,000	158	24
Providence	100,700	33	17
Worcester	50,000	10	11
Lowell	50,000	14	15
Cambridge	48,000	27	29
Fall River	45,000	6	8
Lawrence	35,000	13	19
Lynn	33,000	9	15
Springfield	31,000	7	12
Salem	26,000	12	24

Normal Death-Rate, 17 per 1000.

MESSRS. EDITORS, — Some pertinent statements have been made in the *JOURNAL* lately in regard to the appointment and the duties of coroners, and it is very satisfactory to see this subject brought to the attention of the profession and the public through the influential pages of the *JOURNAL*. Yet with all that has been said, few are aware of the positively bad standing and character of many of the individuals who hold this important office. Of the thirty-five coroners in Boston it is safe to say that nearly one half of the number are of such standing that they can reflect no credit on their profession or upon any position to which they might be appointed.

Any one knowing the antecedents of those holding this office in Boston will be convinced of this by an inspection of the list of coroners for Suffolk County. The fact that one of these officials has been charged with malfeasance and perversion of his office, another with embezzlement and fraudulent insurance, that two others in times past have been indicted for procuring abortions, that one is now under indictment for adultery and blackmail, and that another has frequently been arrested for drunkenness and disorderly conduct, and that in each instance they have escaped justice by means best known to themselves, speaks volumes in regard to the character of the influence that secured their appointments and that retains them in office.

The abuse of their position of which some of these men have been guilty is notorious, and as it is only by the true state of things becoming known that an improvement can be hoped for, I hope that the influence of the *JOURNAL* may continue to be directed towards securing the reform of this great evil.

A.

MESSRS. EDITORS, — Dulcamara asks in reference to the case of depressed fracture of the skull, reported in the *JOURNAL* of February 24th, whether the vomiting, vigilance, and paralysis would not indicate a collection of fluid beneath the dura mater which would require an incision. Had there been any bulging of the dura mater pointing to a circumscribed collection of fluid, an incision might have been called for, but in the absence of such special indication the general symptoms would not warrant an exploratory operation.

The pus found at the autopsy was in a thin, diffused inspissated layer, showing a general suppurative inflammation of the membranes, which could not have been relieved by an incision.

S. CABOT.

ERRATUM. — On page 312 of the *JOURNAL* for March 16th, in the sixth line, for *New York Medical Journal* read *American Journal of Obstetrics*.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — The annual meeting will be held on Monday evening, April 3d, at eight o'clock; the annual election of officers will be held. Dr. J. S. F. Bush will read a paper on Stricture of the Urethra.

THE profession is warned against a Dr. Doudney, pretending to have a letter from Dr. Frank H. Hamilton of New York, also one from a clerical friend. He is thirty years old, and has an English accent. We are authorized to say that he is an impostor.

BOOKS AND PAMPHLETS RECEIVED. — Preliminary Report of the Mortality Experience of the Mutual Life Insurance Company of New York from 1843 to 1874. By G. S. Winston, M. D., and E. J. Marsh, M. D.

A Short History of Natural Science for the Use of Schools and Young Persons. By Arabella B. Buckley. With Illustrations. New York: D. Appleton & Co. 1876. (From A. Williams & Co.)

Memoir and Correspondence of Caroline Herschel. By Mrs. John Herschel. With Portraits. New York: D. Appleton & Co. 1876. (From A. Williams & Co.)

A Case of Pseudo-Hypertrophic Muscular Paralysis. By C. T. Poore, M. D. (Reprinted from the *New York Medical Journal*, March, 1876.)

Reports of the Medical Officer of the [British] Privy Council and Local Government Board. New Series. Nos. IV., V., and VI. 1875. (From Dr. Sutton.)

Legal Chemistry. A Guide to the Detection of Poisons, Examination of Stains, etc., as applied to Medical Jurisprudence. Translated, with Additions, from the French of A. Naquet, Professor of the Faculty of Medicine, Paris, by J. P. Battershall, Nat. Sc. D. With a Preface by C. F. Chandler, Ph. D., M. D., LL. D. New York: D. Van Nostrand. 1876.

Ninth Annual Report of the Board of Trustees and Officers of the Minnesota Hospital for the Insane, for the Year ending November 30, 1875.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XCIV. — THURSDAY, APRIL 6, 1876. — NO. 14.

THE LOCALIZATION OF FUNCTIONS IN THE BRAIN.

BY DR. EUGENE DUPUY.

*Abstract of a Lecture delivered at the Rooms of the Boston Society for Medical Observation,
March 14, 1876.*

THE lecturer gave a brief historical survey of his subject, speaking particularly of the discovery, by Bouillaud, Dax, and Broca, of the lesion believed to give rise to aphasia, and of the extension, mainly by Dr. Hughlings Jackson, of the theories based thereon to other movements besides those resulting in speech.

In 1870 were published the well-known experiments of Fritsch and Hitzig, which seemed to prove that the cortex cerebri was not, as previously supposed, inexcitable to direct irritation, but on the contrary that, by the application of electricity to certain points on its surface, muscular movements, generally confined to the opposite side of the body, were called out. These experiments were repeated, in a modified form, by Ferrier, and many others.

In the mean time, clinical observations by Charcot, Hitzig, Ferrier, Jackson, and others were published, in which pathological lesions of the cortex cerebri seemed to have been followed by results analogous to those obtained in the laboratory, and bringing additional evidence in favor of the theory of the localization of motor centres in the human brain.

This theory the lecturer proceeded to criticise, by examining both the pathological and the physiological evidence more closely. It was shown that in some cases lesions having the same seat had caused quite different groups of symptoms; while, on the other hand, similar symptoms had followed lesions confined, in different cases, to different parts of the brain, sometimes not even involving at all those parts containing the supposed motor centres (principally the convolutions adjacent to the fissure of Rolando) and found by Betz to be the seat of the large ganglion cells believed to be analogous to those of the anterior (motor) cornua of the spinal cord; while, in other cases, the regions affected by the disease were so extensive, or so numerous, that a *petitio principii* would be involved in using them as evidence. Furthermore, he said that Brown-Séquard had collected more than two hundred cases of cerebral lesions followed by paralysis on the same side of the body.

Looked at from the physiological point of view, the question is whether these localized movements are really due to excitation of distinct centres in the cortex cerebri, transmitted thence directly to the muscles; or to the irritation of deeper parts by currents of electricity which branch off from the main current; or, finally, to the reflected irritation of deeper-lying centres not yet defined.

One objection has been made to the first theory, on the ground that when a piece of the cortex, found to contain a "centre," is cut from its connections, but left *in situ*, and the same (minimal) excitation applied upon it as before, the movements do not take place; but this was believed, as first claimed by Carville and Duret, to be due to the fact that the layer of blood effused in the cut disturbs the physical relations of the parts to the electricity. The argument offered by Ferrier that, if the movements were due to reflex irritation, they would not be so uniform nor attend so closely the irritation of definite points, was met by the observation that many reflex movements, as those of walking, are perfectly uniform, and that, the physical and physiological conditions remaining constant, the same irritation would in either case naturally be followed by the same results.

Schiff believed that the movements in question were reflex in origin, partly because they follow the irritation after a greater interval than would be required for the direct conduction of an impulse through unbroken nerve-fibres; while he considered those "centres" as the seat of the muscular-sense, on account of the peculiar manner in which the animals use the limbs for which the "centres" have been destroyed. On account of the peculiar mental condition of patients with general paralysis of the insane, characterized by forgetfulness and inattention, it is hardly fair to draw a comparison, as has been done, between their movements and those referred to by Schiff.

The lecturer then stated his own opinion to be that the movements are of reflex origin and excited by the irritation of nerve-fibres starting from the pia mater, and accompanying the blood-vessels thence to deeper-lying centres whose position we do not know. The existence of such fibres is susceptible of demonstration, and indeed they have been spoken of by Henle and Merkel, though the former did not believe them to be nervous in character.

He (the lecturer) himself had found in several experiments that when the pia mater is carefully destroyed by the actual cautery at the seat of a supposed "centre," and then the animal allowed to recover, and afterwards again examined, the movements are no longer to be produced by excitation with electricity at that point, though they still follow similar excitations in the immediate vicinity. That this effect does not attend simple destruction of the cortex has been abundantly shown. The lecturer had not been able to discover signs of secondary

degeneration of the fibres of the corona radiata by the microscope, and his inference was that the nerves of the pia mater aforesaid had alone degenerated, giving rise to the result described.

The "motor" regions of the cortex, according to this view, differ from the rest on account of peculiarities in their vascular supply, the vessels seeming to penetrate at once deeply into the brain, and it is possible that the movements are due to localized arterial spasms, different arterial branches being supplied by different nerve-fibres.

As instances of other reflex phenomena due to excitation of definite points of the cortex cerebri, the speaker referred, finally, to the experiments of Bochefontaine and Lépine, as to the effects of such excitations upon the secretion of saliva, the circulation of the blood, and the movements of the intestines.

SALICYLIC ACID IN ACUTE RHEUMATISM.

BY E. L. WARREN, M. D., SOUTH FRAMINGHAM.

IN order to form a correct judgment of the therapeutic value of any remedy in controlling satisfactorily any disease, it is necessary to test the remedy repeatedly, and to study carefully its effects in a sufficient number of cases. That an almost unlimited number of remedies has been used for the treatment of acute rheumatism, without special benefit in cutting short this very troublesome complaint, is as true as that to-day rheumatism runs its natural course in spite of any known remedy which has exercised over it any particular specific control.

Recently, however, we have received the announcement of Professor Traube that in fourteen cases reported by Dr. Stricker salicylic acid has been used with such good results, and the effects of the remedy have been so uniform, that the profession has been strongly urged to try it. In the *JOURNAL* of February 10th, Dr. Charles P. Putnam refers to the rapid recovery of a case of polyarthritic rheumatism treated by this drug with striking results. The following case, which has lately come under my observation and treatment, will perhaps serve to verify the usefulness of the new remedy.

Mr. W., a young man, twenty years old, a brakeman on the Boston and Albany Railroad, was taken February 13th with severe pain in the left ankle and top of the foot, attended with great heat and swelling. When called to see the case the following day, I found the patient lying on a lounge, and unable to move the foot without extreme pain. His pulse was 110, his skin dry, his tongue coated. The usual remedies were prescribed.

February 15th. The temperature was higher; the pulse was 120. There was no appetite, and the patient had taken to his bed. The inflammation had extended to both the knees; the foot was somewhat bet-

ter. The patient had had no sleep the previous night. I prescribed sulphate of quinine and Dover's powder, alternating with syrup of lime. Hot applications were made to the joints, and lubrication with camphorated oil.

February 16th. The patient was no better; his pulse and temperature kept up, but he had slept better from the effects of the Dover's powder. The inflammation had attacked the right wrist and the back of the hand with the same amount of pain and swelling as in the foot.

February 17th. The patient was much the same. The pain and inflammation had extended to the muscles of the neck, and the man was unable to move his head from side to side without difficulty. I prescribed one drop of aqua ammoniæ in a teaspoonful of water every three hours.

February 19th. The patient was somewhat better, and continued to improve after this date. He went to work again in about a fortnight from the time he was first taken sick, the disease having run about its natural course.

Less than one week had elapsed before he was taken down again with the same trouble, commencing this time in the other foot, and extending to both knees as before. I was called immediately. The pulse was 120; the skin was hot and dry. The patient was very nervous and fretful; his tongue was coated; his urine was high-colored. Salicylic acid was given, seven grains in wafers every two or three hours, with no other treatment whatever. This treatment was commenced sometime in the forenoon. After the first few doses marked improvement was noticed, and after the ninth dose, sixty-three grains in all, the patient was decidedly better. The skin was moist, the tongue nearly clean, the pulse 80. The inflammation had gone from the foot and knees; the patient's spirits were good; there was no appearance of inflammation in other parts of the body, as before, and he remarked that he felt well enough to get up and go to work.

The above is a single case of acute rheumatism, recurrent within one week, and the results of its treatment by salicylic acid are sufficiently marked. But as these isolated cases cannot be considered an adequate test of the remedy, we shall wait with a good deal of interest to hear the experience of others.

A CASE OF ATRESIA VAGINÆ SUCCESSFULLY OPERATED ON.

BY W. SYMINGTON BROWN, M. D., STONEHAM.

STRICTLY speaking, the genital canal extends from the vulva to the distal extremity of the Fallopian tubes, and any part of the canal may be closed, either congenitally or as the result of disease. The labia

majora are sometimes found adherent in young girls. I have operated in two cases by stretching the parts and separating them with the handle of a scalpel, after which they were kept separate by means of a pledget of oiled lint, and no further trouble was experienced. But the most interesting form of atresia is that in which the vagina is congenitally closed. M. Amussat, in the *Gazette Médicale* for 1835, gives an account of a case where there was complete closure, which he finally succeeded in curing; and since then many cases have been recorded.

Mrs. F., twenty-eight years of age, married fourteen months, was first seen by me in February, 1875, at Dr. Stevens's office, Stoneham. On attempting to make a vaginal examination, the finger was arrested by a sort of diaphragm about three quarters of an inch from the vulva. Simpson's uterine sound could be passed with difficulty through a small opening in the centre of this membrane, and through this opening the menstrual fluid had found a vent. An examination per rectum revealed the uterus in its normal place. The obstruction was not a thickened hymen, for that membrane had been incised fourteen years previously, and ocular inspection also proved that there was a narrowing of the canal all around where the membrane was attached.

The next day, with the assistance of Dr. Winthrop F. Stevens, I proceeded to operate. The patient was fully etherized. A small bivalve speculum was introduced; an Atlee's guarded knife was passed through the opening in the membrane, and three slight incisions were made, two lateral and one inferior. The speculum was then withdrawn; a Simpson's dilator was passed through the opening, and the membrane was torn by slowly expanding the instrument, whilst at the same time a finger was kept in the rectum. Then, removing the dilator, the operation was completed by introducing first one finger and afterwards two fingers up to the posterior cul-de-sac. A cotton plug, saturated with glycerine and a drachm of laudanum, was left in the vagina till next morning. The passage was washed out twice a day with a tepid solution of permanganate of potassium. Two days later, one of Sims's glass dilators was introduced, and worn at intervals for three weeks without discomfort. I have recently learned, nearly a year after the operation, that there has been no contraction of the canal since I last saw her, and that both husband and wife are perfectly satisfied with the result, as regards marital relations.

I am inclined to think that one element in the success consisted in the circumstance that the parts were torn instead of being cut. The slight nicks above referred to were needed to allow room for the dilator. There was not a teaspoonful of blood lost. Dr. Emmet, of New York, in his valuable work on Vesico-vaginal Fistula,¹ gives the details of an interesting case of atresia, in which the knife was used five times unsuccessfully

¹ Page 136.

during a period of eighteen months ; the case was finally cured by lacerating the septum. After a period of nineteen months had elapsed there was no contraction of the vagina.

CASES OF MUMPS COMPLICATED WITH EPIDIDYMITIS.

BY J. T. BOUTELLE, M. D., HAMPTON, VA.

DURING the spring of 1875 an epidemic of mumps occurred in this town and vicinity, marked by a large number of cases accompanied by inflammation of the testicle. Dr. Flint states, in his *Theory and Practice of Medicine*, that this complication must be exceedingly rare, and that he had seen but one case of it. Vogel, in his work on *Diseases of Children*, remarks that it is an extremely infrequent complication, and that during an epidemic of mumps prevailing at Munich in 1857 it was seen but once, as far as he was aware. I have therefore thought that the following cases which have fallen under my observation might be of interest to the profession. In none of the instances was there any suspicion of venereal disease ; in two cases the complication could be attributed to over-exertion or exposure to cold and dampness ; in the others no exciting cause could be assigned. The swelling and tenderness were chiefly in the posterior portion of the testicle, as in gonorrhœal epididymitis. It usually took place as the swelling of the parotids began to subside, the fever running quite high for a short period and a few cases being marked by delirium.

CASE I. John F., colored, aged eighteen years, applied to me January 14, 1875. He had had mumps on both sides for nine days. Swelling of parotids was nearly gone. The day previous he had had pain in the left hip and groin and along the course of the spermatic cord. The left testis was very tender posteriorly, and was reddened ; there was not much swelling. I ordered rest in bed with the testicles raised, and a flaxseed poultice containing a little tobacco applied. Light diet. He was to have six grains of Dover's powder, night and morning. He recovered entirely in a few days.

CASE II. S. W., aged nineteen, while recovering from mumps exposed himself to cold and wet ; when I first saw him he had pain in both sides of the abdomen. His pulse was 96. His tongue was coated white. There was pain in the right testis, which was swollen and tender. I directed that the testicles be kept raised, and a flaxseed and tobacco poultice applied. He took four drops of tincture of aconite every four hours. The symptoms rapidly disappeared, and he was well in four days.

CASE III. Lewis C., aged fifty, had had a light attack of mumps for four days. Two days before I saw him, he was attacked with pain

and swelling of both testicles, after getting wet and taking cold. I found him in bed, his face flushed, his tongue coated white, his pulse 110. He had much nausea and great difficulty in retaining anything on his stomach. His bowels were constipated. I prescribed Seidlitz powder, to be taken at once, and four drops of tincture of aconite every four hours. A flaxseed and tobacco poultice was applied that night, and the next day a simple flaxseed poultice. This patient made a comparatively slow recovery, but after sixteen days he rode on horseback a distance of seven miles. At that time some tenderness remained in the posterior portion of the testicles; the swelling had entirely gone. He was advised to wear a suspensory bandage.

CASE IV. Warren C., aged eighteen, son of the above patient, had mumps on both sides for five days. When I first saw him, the swelling of the parotids was nearly gone; the day previous the right testis became a little swollen and was tender to the touch posteriorly; there was not much fever. I directed a flaxseed and tobacco poultice to be applied at night, to be changed for one of flaxseed alone the next day. The patient recovered in a few days.

CASE V. C., aged nineteen, colored, was first seen March 25th. He had had mumps of both sides for five days. The swelling of the parotids was subsiding. This morning he had suddenly fainted while sitting by a stove. On my visit I found him in bed, his eyes dull and heavy, his pulse 75, his tongue coated with a grayish fur. He had no decided pain, but complained of a "sick feeling" in the abdomen. I gave him Seidlitz powder, and ten grains of bromide of potassium three times a day.

March 26th. The patient complained of pains all over his body; he had no appetite. His bowels were moved by the cathartic. The right testis was very tender and somewhat swollen. Flaxseed and tobacco poultice was applied.

March 29th. The swelling was nearly gone, and but very little tenderness remained. The patient was permitted to sit up, and was advised to wear a suspensory bandage.

CASE VI. Charles G., aged twenty, colored, summoned me March 25th. He had had mumps on both sides for about a week. The swelling of the parotids was nearly gone. The day before I saw him he began to be sick and feverish, and vomited his food. His pulse was 92; his tongue was coated white; his face was flushed. He had excessive nausea, and could not retain his food. He had had two dejections after taking castor-oil. Pain was felt in the testes when he attempted to walk. He was ordered to keep his testicles raised by a bandage. He received tincture of aconite, four drops every four hours.

March 26th. Face flushed. There was pain in the back and limbs, and along the course of the ureters in the abdomen. Pulse 80; tongue

cleaner. Less nausea. The testes were swollen and quite tender posteriorly. The patient was very talkative; he was said to have been delirious the previous night. The tincture of aconite was omitted, and one eighth of a grain of sulphate of morphia at night was prescribed. A tobacco and flaxseed poultice was ordered.

March 28th. The patient was found this A. M., about four o'clock, out-of-doors, in his shirt, quite crazy. He was put to bed, and I saw him at 6.30 A. M.; he answered questions rationally, but seemed "queer," and had a puzzled expression of countenance. Pulse 76. Tongue clean, skin cool. The swelling of the testicles was almost gone, and there was but little tenderness. I prescribed bromide of potassium, twenty grains at once, and ten grains every six hours subsequently. Diet of beef-tea and toast. After remaining in bed for three days, during which interval he had no return of the delirium, the swelling and tenderness entirely disappeared, and he was allowed to get up, wearing a suspensory bandage.

CASE VII. B. W., aged twenty-one, colored, after an attack of mumps of both sides lasting six days, was seized with severe headache and fever. His pulse was 80, strong; his tongue was covered with a brown coat. The right testis was very tender behind, and somewhat swollen. A Seidlitz powder was prescribed. A tobacco and flaxseed poultice was applied locally, and four drops of tincture of aconite were given every four hours. The patient improved gradually, and after five days the swelling and tenderness had disappeared, and he was allowed to get up, wearing a suspensory bandage.

CASE VIII. E. P., aged nineteen, colored, had mumps on both sides for a week; at the end of the week the swelling of the parotids had gone; the testicles were slightly swollen and tender. He was enjoined to remain in bed, and a flaxseed and tobacco poultice was applied to the scrotum. He was well after three days.

CASE IX. H., aged twenty, colored, had mumps on both sides for a week. When I saw him the swelling of the parotids was not yet gone. There was pain in the abdomen and tenderness in the iliac regions. Pulse 100. Tongue coated white. Testes tender, but no swelling. Bowels moved the day previous. He was ordered to keep in bed. Warm fomentations were applied to the abdomen. Light diet. Three drops of tincture of aconite were given every four hours. The patient improved rapidly, and after three days was allowed to get up and omit all medicines.

RECENT PROGRESS IN THE TREATMENT OF DISEASES OF THE THROAT.

BY F. I. KNIGHT, M. D.

Extirpation of the Larynx.—The idea of extirpating the larynx has undoubtedly occurred to many a surgeon when called to consultation in case of malignant disease of that organ. Czerny, however, gave the first real impulse towards this operation on the human body by showing its practicability on dogs.¹ The operation has been performed already seven times on the human subject, and the results go to show that the chances of the patient's surviving the operation are by no means bad, that deglutition is not permanently interfered with, and that speech is naturally much facilitated by removing the obstruction between the lungs and the mouth. We have obtained the particulars of these operations as far as possible, thinking they might be of interest and possibly of service to some of our readers. It will be noticed that all of the operations were in cases of cancer, some of them altogether too far advanced. It will be seen that in Billroth's first case (the first ever performed on man) the patient lived a little over six months, and died of a recurrence of the disease; that in Heine's case the patient was alive at the end of five months. Bottini's case was reported nearly three months, and Langenbeck's one week, after operation, and they were doing well after those intervals. In Schmidt's case the patient died on the fifth day, of collapse. Billroth's second case ended fatally on the fifth day, apparently of hypostatic pneumonia. Schönborn's patient died several days after the operation. It would be gratifying to hear more in regard to those who survived the operation. It does not seem improbable that by operating early in case of epithelioma of the larynx we may prevent recurrence, as we do when the disease is of the lip or the penis.

CASE I. Billroth's first case was as follows.² The patient was a man, thirty-six years old, a teacher by profession, with epithelial carcinoma of the larynx. He had been hoarse three years, and had been treated by cauterization with solid nitrate of silver and by parenchymatous injections of liquor ferri. He was a sound, healthy-looking man. External examination revealed nothing abnormal. Section of the larynx was performed November 27, 1873, for the purpose of removing the disease from its interior. The disease quickly recurred, however, and the larynx was extirpated December 31, 1873. Trendelenburg's tampon was discarded, as its use had not been successful in the previous operation on this patient, and the operation was performed after the method of Czerny. The incision of the previous operation was ex-

¹ Wiener medicinische Wochenschrift, No. 27, 1870.² Gussenbauer, Archiv für klinische Chirurgie, xvii. 343.

tended upward to the hyoid bone, and the soft parts were separated to either side. Two pretty large branches of the right superior thyroid artery were tied. The cicatrices from the first operation and the softness of the diseased cartilages retarded the present operation. The cartilages would bear but little traction, and the hook kept tearing out, so that it was nearly an hour before Billroth was ready to cut through the trachea transversely, separate the larynx from the œsophagus, and cut through the thyro-hyoid ligament. There was considerable bleeding from the superior laryngeal arteries. As the epiglottis was now found to be diseased, the lower third of this was removed, and also a part of the two upper tracheal rings. The trachea, which had been held with hooks, was now fastened to the skin of the neck on both sides by two sutures; the gullet was then narrowed by three sutures, which brought the raw surfaces of the œsophagus in contact with each other, with the idea of rendering the passage of food through the wound difficult. The whole operation lasted an hour and three quarters; the patient, though he had lost much blood and suffered much pain, was in better condition than could have been expected, and his strength came up rapidly under the influence of wine administered through an œsophageal tube. The paroxysms of cough almost entirely ceased under morphia administered subcutaneously. Four hours after the operation cough returned, and after a severe paroxysm arterial secondary hæmorrhage occurred, the blood flowing freely down the trachea. The left superior laryngeal was found spurting, and this, as well as two subcutaneous arteries, was tied. The patient rallied again quickly. The parts contracted rapidly during the first few days. The trachea did not retract much after the threads which held it were cut. The secretion of pus was profuse at first, but diminished rapidly, notwithstanding the irritating effects of the saliva and of particles of food. No unfavorable complication occurred; there was neither the so much dreaded infiltration of the neck, with consecutive mediastinitis and pleuritis, nor capillary bronchitis, excited by decomposed blood and secretion (unfortunately, not uncommon after total extirpation of the tongue). The patient was instructed to force expectoration energetically and systematically. The movements of swallowing, even immediately after the operation, were not interfered with, but the greater part of the liquid taken came out through the wound; therefore, at first, nourishment was introduced through an œsophageal tube. After the eighth day the patient began to try to swallow water and very soft food; the more he tried the less came out of the wound. On the eighteenth day he tried solid food. None came out of the wound, and artificial feeding was given up.

An artificial larynx was now to be devised. After various efforts, Gusenbauer constructed the following, which he recommends as the best. There are three parts: the tracheal canula, the pharyngeal canula, and the

phonation canula. The tracheal canula is introduced and fastened in the usual way. The pharyngeal canula, also curved, is introduced through the tracheal canula, its end directed upward and made fast to the tracheal part by means of a sliding ring. In the convexity of each of these canulæ is a large oval opening, and when they are in place, as above described, these openings correspond, and there is a free passage of air from the trachea through the mouth, if the external opening of the first canula is closed. If the phonation canula, which has two openings corresponding to those in the other canulæ, and which bears the tone-giving tongue in a frame, is now introduced within the pharyngeal canula, the reed is set into vibrations, which are transmitted to the air in the pharyngeal canula, and thence into the pharynx, mouth, and nose for use in articulation. On the pharyngeal end of the pharyngeal canula is a little cover or lid (artificial epiglottis), which is held open by a strong spring. During deglutition this lid is pushed down by the food, or the base of the tongue. The vibrating tongue in Gussenbauer's instrument was made of metal, but he thinks it may be possible to make use of elastic membrane, the vibrations of which more nearly resemble the human voice, for this purpose, if the artificial larynx is introduced before so much contraction of the parts has taken place. The voice as produced by means of the artificial larynx was loud enough to be heard across a large ward, but was, of course, monotonous and of unnatural quality, and required considerable effort in its production.

March 3, 1874. The patient was discharged from the hospital, well. [I know gentlemen who saw this patient, after the operation, drinking beer at the Riedhof without the slightest difficulty. — REP.]

Soon after his return home he suffered from a recurrence of the disease, which proved fatal July 7, 1874.¹

CASE II. This case was that of Heine.² The patient was a man, and, like Billroth's patient, a teacher, with carcinoma laryngis, who had suffered for a long time from dysphagia and dysphonia. His age is not given in Schmidt's *Jahrbücher*. Crico-tracheotomy was performed twenty-four days before the extirpation. The method of operation was about the same as in Billroth's case. Nine vessels were tied. A part of the epiglottis was left. The patient was much collapsed, but revived after wine had been administered through an œsophageal tube. On the fourteenth day Trendelenburg's canula was replaced by a hard-rubber one, and the vocal apparatus tried. When Professor Heine presented this patient to the medical society at Prague, the man could speak in a perfectly intelligible whisper without any apparatus, more intelligibly with the canula, but "could not speak with the complete vocal apparatus on account of a severe catarrh." There was no sign of a recurrence of the disease at the end of five months.

¹ American Journal of the Medical Sciences, October, 1874.

² Böhm, Correspondenz-Blatt, ii. 265; Schmidt's *Jahrbücher*, clxiv. 45.

CASE III. Schmidt.¹ The patient was a man fifty-six years old, with carcinoma of the larynx. His voice had been affected over three years, and the larynx had been subjected to severe local treatment with chromic acid, caustic potash, galvano-cautery, etc. Tracheotomy was performed June 2, 1874. Difficulty in swallowing ensued, and extirpation of the larynx was determined upon. This operation was performed August 12, 1874. After the patient had been put under the influence of chloroform, and a canula (the upper half of the shield of which had been ground off) had been introduced, an incision was made through the skin from the tracheal opening up to the hyoid bone. An attempt was made to save a little bridge of skin to fasten the canula to, but it was subsequently cut away to make room. A Trendelenburg's trachea-tampon which had been provided, when placed about the canula proved to be too large; it had to be removed, and sponges were used to prevent the blood from running down the trachea. Inasmuch as the operation after cutting through the trachea, as performed on the cadaver, had been short, and as the thick canula of the artificial larynx was to be inserted immediately after it, Schmidt did not hesitate to proceed with the operation. After the soft parts had been cut through, a sharp double hook was passed around the cricoid cartilage, and the trachea cut through. Here the difficulties began. There was bleeding, and the sensation of cutting cartilage was interfered with by the cicatricial tissue which had formed around the trachea after tracheotomy. On the last incision for the separation of the trachea there was a strong arterial spurt, which was stopped by fastening forceps on the vessel. Profuse venous hæmorrhage came on from the small veins on the anterior surface of the œsophagus, as the larynx was separated from it. The blood ran down the trachea through the sponges. The sharp hook tore through, so that the surgeon was at length obliged to hold the larynx with his fingers. It was necessary to get at the bleeding veins as quickly as possible. The larynx could not be pulled down far enough to permit the introduction of the knife over the thyroid cartilage, so this cartilage was cut through as high up as possible; this required great strength, as the cartilage was ossified. All but a small part of the larynx was removed in this way. The bleeding was stopped by sponges which had been dipped in ice-water. The rest of the thyroid and the tips of the arytenoids were now easily removed with forceps and scissors. The epiglottis was entirely healthy and was left. There was no hæmorrhage from the superior laryngeal artery.

The canula of the artificial larynx was now inserted, the opening in the convexity being closed with sticking-plaster. As secondary hæmorrhage seemed probable, the wound was left open and dressed with carbolic acid. Previously, a suture had been put into a transverse exten-

¹ *Archiv für klinische Chirurgie*, xviii. 189.

sion of the cut of the œsophagus, which must have been made when the larynx was taken out. The patient, whose pulse was weak, received a glass of wine through an œsophageal tube. Immediately after the operation the condition of the patient was good. He complained only of pain in swallowing, which he often tried. About half an hour after the operation moderate bleeding occurred from a vein which had been cut longitudinally, near the inferior thyro-hyoid muscle. Until toward evening blood, mostly mixed with mucus, was coughed through the canula. The patient had an hour's quiet sleep in the afternoon. In the evening the pulse was 96, the temperature 100.7°. An enema of three eggs was given. The patient was excited.

August 13th. During the night the patient was very restless; he coughed up much chocolate-colored sputa. The pulse was 86, the temperature 100.2° in the morning; in the evening the pulse was 96, the temperature 102.5°. The patient complained much of thirst; he seemed to swallow the water from ice melted in the mouth. He had enemata of eggs and red wine. In the evening he drank two teaspoonfuls of milk, of which little came out at the external wound. Everywhere over the chest the vesicular breathing was extremely weak, decidedly influenced by the absence of laryngeal sound.

August 14th. The night was very restless, in spite of two subcutaneous injections of morphia. The patient was much excited. In the morning the pulse was 108, the temperature 101.8°; evening, pulse 104, temperature 103.2°. The condition otherwise was tolerable. There was very little cough. Pain in swallowing continued.

August 15th. Morning, pulse 112, temperature 102.7°; evening, pulse 100, temperature 102.2°. The wound smelled badly, in spite of the carbolic acid. Much nourishment was introduced through an œsophageal tube, which was passed easily, notwithstanding the œdema which had now invaded the posterior wall of the œsophagus. The enemata of food were continued.

August 16th. The patient begs for air. Morning, pulse 124, temperature 101.3°; evening, pulse 116, temperature 102.7°. The wound was cleaner; it had very little smell. The discharge from the canula was muco-purulent, but not very considerable.

August 17th. Pulse 150, hardly perceptible; temperature 102.7°. Auscultation of the chest gave no change. The urine was said to have been dark, but unfortunately it was thrown away. The patient died at three P. M., of collapse. A post-mortem examination, unfortunately, was not allowed.

Schmidt calls attention to the following precautions to be taken in these operations: (1.) Not to operate without a good tampon-canula. (2.) It must be decided in the future whether it is better to do tracheotomy some time before, so that the trachea may become fastened to the skin.

(3.) Nourish the patient through an œsophageal tube from the beginning, as it is easy, though there is no doubt of the efficacy of enemata of food. He says he leaves undecided the question as to how much mental excitement had to do with the patient's death, but says he was not quiet fifteen minutes; he leaves also undecided the question whether carbolic-acid poisoning from the dressings had anything to do with his patient's death, as the urine was thrown away.

CASE IV. Billroth.¹ The patient, a man of fifty years, had been suffering for some time from hoarseness and increasing dyspnoea. Epithelioma was diagnosed by Schrötter. Billroth gave a favorable prognosis with regard to recurrence, as there was apparently no infiltration of adjacent lymphatics. The larynx was extirpated November 11, 1874. The patient died on the 16th, apparently of hypostatic pneumonia.

CASE V. Schönborn² reported at a meeting of the medical society in Königsberg on January 25, 1875, that he had extirpated the larynx of a man of seventy-two years for carcinoma. On the third day after the operation the patient was doing well, but he died several days later.

CASE VI. Bottini.³ The patient was a countryman, aged thirty-four years, who had for some time had a mechanical obstruction in the larynx. In August, 1874, laryngotomy was performed in the crico-thyroid space on account of dyspnoea. In October the galvanic cautery was applied to free the larynx from the growth, but it remained impervious to air. Unsuccessful attempts were then made to dilate the parts by means of laminaria tents. Finally, the larynx was extirpated February 6, 1875. Chloroform was not given. An incision was made from the hyoid bone down to the artificial opening in the larynx; then, by means of horizontal incisions to the right and the left, two flaps were formed, which were dissected and turned outwards. The anterior part of the larynx was then carefully laid bare, the edges of the wound being held apart by hooks, and the connection between the larynx and the œsophagus was severed by means of the fingers and blunt instruments. This part of the operation was rather difficult, in consequence of the shortness and thickness of the patient's neck, and of his continued attempts to expectorate. These attempts were so violent that the patient three or four times during the operation expelled the canula with the sputum. It was found impossible to remove the larynx by at once cutting it free from the trachea below and the hyoid bone above, and the process had to be suspended several times to allow the patient to relieve himself by coughing up the mucus and blood which escaped into the trachea notwithstanding all the care that was used to prevent it. Several arteries, including the

¹ Allgemeine Wiener medicinische Zeitung, No. 46, 1874.

² Berliner klinische Wochenschrift, No. 38, 1875.

³ American Journal of the Medical Sciences, July, 1875; from Gazzetta delle Cliniche, March 9, 1875.

two superior laryngeal, were tied, and the galvanic cautery was applied to others. The subsequent history of the case shows that on February 11th erysipelas set in, but disappeared by the 21st; from this time the patient's temperature did not exceed 98.9°, nor did the pulse rise above 80. February 21st he was able to swallow fluid and semi-fluid food. The paroxysms of cough had become rare and slight. The wound had healed, for the most part by the first intention, notwithstanding the erysipelas. The patient slept fairly at night, and altogether his condition was promising.¹

(To be concluded.)

SANITARY AND MEDICAL REPORTS OF THE NAVY DEPARTMENT.²

THIS volume of naval sanitary and medical reports is a thick octavo of eight hundred and eighteen pages, illustrated with a few maps and diagrams. The reports, which were prepared for publication by Dr. H. C. Nelson, comprise those ordinarily presented in the routine of duty by medical officers of the navy, and considering the fact that their authors in most instances never expected to see them in print, they are highly creditable, and contain much interesting matter. Of course to the general practitioner there is much concerning the medical topography and meteorology of foreign countries, and pertaining to naval hygiene, that is not particularly attractive, save when the question comes to us of recommending to invalids travel abroad and a residence in foreign countries; under such circumstances these reports become of the first importance.

The work contains very full details concerning the course and progress of cholera and of yellow fever, both abroad and on our own coast; considerable space is devoted to small-pox and syphilis, and with the latter the much-vexed question of regulated prostitution is considered, the sanitary rules by which prostitutes are governed in Italy and elsewhere being given with some detail. It seems strange to read that in Syracuse the inspection of prostitutes is conducted by Sisters of Charity. Much space is devoted to the description of hospitals and schools of medicine in various parts of the world. The medical schools of Brazil and Japan receive special mention. There are two medical schools in Brazil, with a yearly allowance for the two of over one hundred and nine thousand dollars; they require six years' study of the student, and in 1872 they contained six hundred and sixty-three matriculants, with a corps of twenty-one professors in each school.

Besides the reports from the various squadrons, comprising a great array of observations in all the ports which our ships of war visit, and of matters con-

¹ The Gazette hebdomadaire, which derives its account of the case from the Gazzetta cliniche di Torino, No. 18, 1875, and the Gazzetta medica italiana Lombardia, No. 17, 1875, dates the operation February 2, 1875, and says the disease was epithelioma.

² *Sanitary and Medical Reports for 1873-74, by Officers of the United States Navy.* Prepared for publication by H. C. NELSON, M. D., Surgeon U. S. N. Washington: Government Printing Office. 1875.

nected with the hygiene of the navy, we have a number of contributions from naval medical officers; these are of value for their originality, and deserve more than a passing notice. Among them are papers on jaborandi and on coca, and reports of interesting cases observed during cruises or at domestic naval stations; in this latter class we find in full detail the case of aneurism of the arch of the aorta treated by electrolysis by Dr. H. I. Bowditch and published in the *JOURNAL* of January 20, 1876.

The surgeon-general of the navy deserves much commendation from the profession for his expressed intention to issue a similar volume annually, or whenever sufficient material may be at command, thus not only stimulating increased efforts on the part of medical officers of the navy, and so promoting their efficiency, but also giving to the profession at large accurate and detailed information upon subjects for which at present they have to rely upon other sources.

THE NORTHAMPTON LUNATIC HOSPITAL REPORT.¹

DR. EARLE'S reports are always valuable because of his careful attention to the details of hospital life, and the present one is no exception. The number of inmates was four hundred and seventy-six; one hundred and fifty-three were admitted and the same number were discharged. Of these, twenty-nine had recovered, forty-five were improved, thirty-eight remained unimproved, and forty-one died. The number of admissions was forty less than the year previous, owing to the completion of two wings at the Taunton hospital, accommodating two hundred patients. It has been customary to transfer chronic cases from Worcester and Taunton to relieve their overflowing wards, but this year none have been received from the latter place. This custom accounts partly for the small percentage of actual recoveries and the large proportion of incurable cases, which the doctor regretfully estimates at nineteen twentieths of the whole number.

The doctor again exposes a source of error in hospital statistics which has often been alluded to in treating of criminal statistics, namely, the repeated recovery and recommittal of the same person: a woman was discharged seven times in eight years, recovered four times and improved three; a man recovered seven times and improved once in nine years; a woman recovered eight times in eleven years, etc. In this way seven persons contributed thirty-seven recoveries to this hospital. In other hospitals, one person has recovered fourteen, and another twenty-two times; and several years ago a woman in a hospital in another State was discharged recovered six times within one year. In twenty-nine years she was admitted fifty-nine times! What a source of error such facts may become, the reader will perceive at once without illustration. From the most reliable statistics attainable, the doctor estimates the percentage of recoveries where hospital treatment has been resorted to at an early stage as sixty-six. In England and Wales, from 1859 to 1874, the recoveries in 171,500 admissions were thirty-four per cent.

The practical working of the law relating to correspondence, passed in the

¹ *Twentieth Annual Report of the Trustees of the State Lunatic Hospital at Northampton.* October, 1875.

winter of 1873-74 at the urgent solicitation of a few unpractical reformers, is rather ludicrous. Here, as elsewhere, letter-boxes were placed in each ward, and the keys delivered to an agent of the Board of State Charities. Here again, as elsewhere, the correspondence was limited to a few crazy productions of no importance, while the usual number of letters went through the regular postal channels. Only *three* letters were deposited during the year, each one convicting its author of insanity by its incoherence.

Persistent effort is made at the Northampton asylum to utilize the labor of the inmates as far as possible, and with a good degree of success. The farm is largely indebted to this source, as well as the engineer's department, the bakery, the paint shop and carpenter's shop, the sewing room, kitchen, and laundry. The constant and efficient workers number fifty-nine men and fifty-six women; the occasional workers, thirty men and eighty-two women.

The *moral* of this report is that the usefulness of a hospital should not be gauged by its percentage of recoveries.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY:

JAMES R. CHADWICK, M. D., SECRETARY.

FEBRUARY 26, 1876. The president, DR. H. W. WILLIAMS, in the chair.

The Metric System. — The following report of the committee on the metric system was presented by DR. E. W. CUSHING: "The metric system, which is in use in nearly all the civilized world except Great Britain and our own country, is not only decimal, but it has a very simple relation between the units of length, surface, solidity, and weight, and their multiples; this immensely facilitates all scientific and mechanical calculations, and has led to the exclusive use of the metric system in scientific works of recent date.

"The names and relations of the multiples and divisions of the different units are so simple that they can be very easily learned and remembered. There is already much more familiarity with the system in this country than one might suppose; it is given in all the arithmetics and is taught carefully almost everywhere in the schools.

"The present being a time of inquiry and intellectual agitation among our people, the committee has thought it best that this matter be referred to the centennial committee, to the end that the latter may bring it prominently before the nation at the International Exposition at Philadelphia. They beg leave to offer the following resolutions: —

"Whereas, The French metric system has been adopted by nearly all Continental Europe and by India, Mexico, and the South American states; and

"Whereas, In the opinion of this society, it is far superior, theoretically and practically, to our present system of weights and measures,

"Resolved, That the Suffolk District Medical Society requests the Massachusetts commissioners at the Centennial Exhibition to use their influence with the centennial committee to secure the prominent exhibition of models and charts of the different scales of the metric system, with simple explanations thereof provided for popular circulation.

"*Resolved*, That when any considerable number of scientific bodies unite in petitioning Congress for the legal substitution of the metric system for that now in use, this society will join in such petition."

Cancer of the Right Ovary ; Death by Thrombosis.—DR. CHENERY reported the following case: Mrs. S., fifty-two years of age, had passed the climacteric period; had been in robust health until recently, when she had had occasional attacks of diarrhœa. When first seen, on August 26th, she was weak, anæmic, constipated, subject to mucous discharges from the rectum, pain in the back and pelvis; there was much flatulence, and defecation was difficult and painful. The thoracic organs showed no signs of disease. There was abdominal tenderness, especially along the course of the descending colon. What appeared to be the fundus of the uterus could be felt just over the pubes, with a soft tumor in the right iliac region; a small, movable, hard nodule was in the left iliac region. Both tumors appeared to be connected with the uterus. This organ was much enlarged, and not freely movable. The rectum was tender, especially where it was compressed against the promontory of the sacrum; at this point there appeared to be mechanical obstruction. The presence of a uterine polyp was suspected, as was the existence of malignant disease somewhere.

The patient failed steadily; the tumor in the right ovarian region gradually increased in size, pressing the uterus downward. The bowels were moved with difficulty by pills of jalapin, etc., but without relief to the abdominal pains and distention.

September 27th the patient was suddenly seized with dyspnœa, and became cold and clammy; the pulse was rapid and weak. She rallied in two hours, but soon relapsed and died.

DR. R. H. FITZ's report of the ovary was as follows: "The immediate cause of death was a recent thrombus of the primary pulmonary artery, extending into the secondary divisions. Its source was not ascertained.

"The pelvis was filled with the cancerous right ovary, which was a soft pink-gray and yellow mass, of the consistence of softened brain. The tumor extended upwards into the right iliac region, as a pear-shaped cyst as large as an infant's head. The uterus was pushed forwards, there being between it and the abdominal walls on the left a fibro-myoma half the size of a fist. The rectum was compressed at the brim of the pelvis by the tumor and constricted by a fibrous false membrane, which partially surrounded it.

"Both Fallopian tubes were dilated and dropsical. The left ovary was evident merely as a fibrous mass." It may be added that there was a polyp, an inch and a half long, suspended from the fundus of the uterus.

A child with chronic enlargements of several fingers, considered to be *enchondromatous*, was then presented by DR. CHENERY.

The Causes and Treatment of Epilepsy were discussed by DR. CORNELL in a long and exhaustive paper which does not allow of abridgment.

DR. WEBBER said he was glad Dr. Cornell laid so much stress upon the subject of diet in connection with epilepsy; he had had several cases in which there had been no improvement until a milk and vegetable diet had been enjoined. In illustration he cited the case of a young man who had his first

attack while camping out, when for two or three days his only food had been crackers and cheese. Subsequent attacks had been induced by imprudence in diet.

Dr. Webber said that no mention had been made of those cases that were due to brain lesions, sunstroke, blows, tumors, abscesses, etc.; these constitute a large proportion of the causes. Injury to a peripheral nerve might also give rise to epilepsy, such as injury to the palm of the hand. He thought the diathesis referred to was clearly established as a state of nervous instability. The nature of the attack, whether entirely motor, with or without loss of consciousness, sensory or mental, probably depended upon the portion of the brain irritated. In this connection Ferrier and Hitzig's experiments were instructive. When the motor centres are irritated by a lesion, either in their vicinity or at the periphery, there is an ordinary attack of epilepsy, with the well-known sporadic muscular action; yet there are attacks in which no motor spasm occurs, as where there is simply vertigo, an aborted attack, *petit mal*, ending in a sensation in the stomach, head, or other part of the body; of these Dr. Webber had seen many instances. One patient had visual perceptions. Again, the phenomena might be wholly mental; there is then loss of consciousness; the patient perhaps walks a long distance, and, on recovering, is quite oblivious as to how he has reached a certain spot. During such attacks a patient may unwittingly commit an assault. In these cases it might be supposed that the irritation, whether arising from disease within the cranium or without, affects only a limited area of the cortex; but as, in Ferrier's experiments, a very strong irritation applied to any portion of the cortex caused general convulsions, so if the irritation is strong enough the motor centres may be secondarily affected, and the general attack follow the aura.

A communication from the Recording Secretary of the Massachusetts Medical Society was read, announcing that the following vote was passed at the last meeting of the councilors:—

“That the word ‘reside,’ as it occurs in the charter and by-laws of the Society, is invariably used in the sense of *legal* residence, and that this construction is to be put upon the word.”

MEDICAL ADVERTISING.

OUR English contemporaries have been much exercised of late over an abuse which seems to have reached a point far beyond the limits prescribed by professional etiquette in other countries. We allude to the custom at present in vogue with English publishers to advertise the works of respectable medical authors in the newspapers and magazines. This practice has been allowed to continue for so long a time uncriticised by the profession that it has pervaded all classes of English medical men, from those who hang upon the outskirts of charlatantry, feeding the public with works on popular medicine, to physicians of the highest standing. Medical authors have enjoyed an airing in the columns of *The Times* as freely as any other aspirant for literary honors. This was looked upon as merely a business custom, emanating solely from the publishers, in accord

with certain usages of the trade, and a matter with which medical men were not at all concerned. We learn, however, from the *British Medical Journal*, which has been much interested in the abolition of this abuse, that "it is more than doubtful whether the profit to the publisher from advertising a medical treatise in newspapers repays the cost. Such books are not commonly so advertised with a view to sell copies of them to the public, but to make known their titles and the names of the authors. In a large number of cases, it is notorious that authors devote an annual sum for the mere purpose of defraying the expenses of such advertising, and subsidize their publishers for the purpose. Medical publishers act, too, very largely as the agents for authors of the books which they publish, and if the leading medical publishers were asked, they would probably say that only a small proportion of the books on their list belong to them, and that they are those which are least advertised in the daily papers."

The medical profession in England appears to be waking up to the fact that this custom is perpetuated by motives far from creditable, and that it will no longer do for respectable men to countenance it by permitting their works to be introduced to the public through the medium of the daily press. This feeling has found expression in resolutions from the various branches of the British Medical Association. Among which the most significant are those of the Metropolitan Counties Branch, which contains the great majority of authors and advertisers of English medical books. These resolutions condemn the practice in the most unequivocal terms.

We are not aware that the custom has prevailed to any extent in this country, although some of our own contemporaries have occasionally thought it necessary to utter a warning note against the practice, which, it would appear, has already prevailed to some extent with New York publishers — or New York medical men, we will not undertake to say which. Our attention has, however, been recently called to the advertisement by a New York firm in several of our daily papers of a book which belongs purely to a special branch of medical science, and can lay no claim to a hold upon the attention of the public. Publishers might claim that such a practice was unavoidable when medical journals possess but a limited circulation, as is the case with most in this country, and that the profession could be reached effectually only through the daily press. Although there is some truth in such a line of argument, we doubt if the custom will ever harmonize with the spirit now prevalent in the profession, which, we think, will look always with distrust upon any works which seek for favor and reputation through any other than strictly professional channels.

MEDICAL NOTES.

— One feature in the new militia bill now before the legislature is of interest to the medical profession. It is proposed to abolish the office of assistant surgeons in the militia. The close of the late war was followed by a general falling off of interest in the militia, and for a few years a feeling of apathy in all military matters existed throughout the State. The approach of the national Centennial reawakened, however, an interest in our citizen soldiery, and everywhere was seen the promise of a marked improvement in the disci-

pline and standing of the state troops. The medical profession shared in this enthusiasm, and it was a hopeful sign of the times that a better class of men were found ready to accept medical appointments in the militia. The proposed change, if adopted, will put a stop to all this, for it is often impossible for a physician in large practice to give up a whole week to the duties of camp, although he is able and willing to divide the responsibilities of the position with an assistant of his own selection. There are many times when a temporary absence from duty is rendered absolutely necessary, and the State should hesitate before it adopts a change which will compel the better portion of the medical staff to resign and give way to men whose practice and experience are so slight that they can at any moment, and for any length of time, give up their private professional business and attend to the duties, oftentimes serious in character, which pertain to their military positions.

— In a paper on milk fever, by Samuel Howe, M. D., published in *The American Journal of Obstetrics* for February, 1876, the author arrives at the following conclusion: That there is such an affection as milk fever, and that it is due to two causes. With the coming of the milk there is always a slight rise in temperature, which may become considerable, and which is due to the sudden development of lactation, for there is a congestion of the glands which are very richly supplied with nerves and vessels, causing a certain amount of nervous action, which will give rise to an increase of temperature; this increases as the congestion increases, but if the child draws the milk as soon as it is formed, the pulse and temperature fall. If this state of things is not relieved, however, a new force comes into action, the milk accumulates in the gland vessels, stretching the skin until it becomes tense, and the fever increases instead of diminishing, not on account of congestion of the breasts, but owing to the stretching and irritation which this produces when the glands are fullest and the breasts hardest; then the temperature is at its maximum.

— According to the *Journal de la Société de Statistique*, as quoted in *The Medical Times and Gazette*, goitre prevails only to a slight extent in Russia in Europe, the vast plains offering few facilities for its development. It is, however, met with in some isolated villages in some of the governments. In Siberia, on the contrary, it prevails endemically. According to a statistical account published by Dr. Hachine, in a population of 365,810, in the government of Irkoutsky, which is watered by the Lena and its affluents, there existed, in 1870, 3400 subjects of goitre and 161 cretins. In some villages 12 and even 25 per cent. of the inhabitants were goitrous, and a Cossack regiment 5040 strong furnished 436 instances of goitre. The affection, it is said, was not known in Siberia previous to the Russian conquest, and is chiefly due to the accumulation of filth and manure in the deep unventilated valleys where it prevails. Its presence is much favored by the habit of the Russian peasants of keeping their abodes perfectly closed up, and which they have carried with them to Siberia. The indigenous inhabitants, who frequently change their places of abode, which are also better ventilated, are only exceptionally goitrous, and then only when they adopt the Russian mode of life.

— *Le Dictionnaire annuel des Progrès des Sciences et Institutions médicales en 1875*, par M. P. Garnier, Paris, comes with commendable promptness. The articles being arranged in alphabetical order, and an index of authors

being added, the work is one of the handiest of manuals. The author says that the year 1875 has not been distinguished for any first-class discovery in medical science, notwithstanding that much has been done to acquaint us more intimately with discoveries previously made. The two new remedies, jaborandi and salicylic acid, are mentioned as having occupied to a considerable extent the attention of physicians, and the part that the vegetable organisms play in disease has been a subject of discussion in both France and England. In physiology the blood has been the principal object of attention, as to its formation, temperature, and coagulation. Considerable space is given in the work to therapeutics; and the new applications of remedies to various affections are noticed. In surgery reference is made to anæsthesia, forcipressure, the elastic ligature, and the transfusion of blood; nor are the new discoveries and developments in ophthalmology, legal medicine, and other branches of our science passed by unnoticed. In fine, this, the eleventh, year of the publication of the annual presents us with a volume fully up to the high standard of excellence which its predecessors have attained.

BOSTON CITY HOSPITAL.

MEDICAL CLINIC.

[SERVICE OF DR. J. N. BORLAND AND DR. HALL CURTIS.]

Acute Rheumatism. — CASE I. C. E., cook, male, twenty-five years old, entered the hospital January 2, 1876, with a second attack. The right knee, ankle, shoulder, and elbow, as well as the left knee, were swollen, red, and painful. There were aortic systolic and mitral presystolic murmurs. Pulse 108; temperature 102°, P. M. Cotton and oiled silk were applied to the joints.

R̄ Chambers's mixture, 3i. ter die.

Dover's powder p. r. n.

January 7th. The temperature was 103.6°; pulse 120, P. M.

January 8th. Patient more restless and complaining of pain. Chambers's mixture omitted.

R̄ Vini colchici seminis, gtt. x. ter die.

January 14th. Patient anæmic; colchicum omitted.

R̄ Ferri valerianatis, gr. i. ter die.

January 18th. Improved; ordered half an ounce of fresh lemon juice every four hours.

February 4th. Up and dressed.

February 13th. Pain has returned; patient was placed on salicylic acid, ten grains every hour, while awake; he took five doses without any effect. The acid was omitted; Chambers's mixture resumed and continued till the 25th. Patient discharged February 28th, much relieved.

CASE II. H. F., brakeman, twenty-five years old, entered hospital January 14th, with a second attack. The ankle and toe joints were affected; there was also rheumatoid iritis. He was placed on Chambers's mixture, one ounce ter die. The eye was treated with solution of atropia and fomentations. His pains continued without relief until February 14th, when the alkaline treatment was

discontinued, and salicylic acid was given in ten-grain doses every hour while the patient was awake. After eight doses had been taken the pain was relieved. The acid was continued in hourly doses during the day-time until February 25th, when the patient was entirely free from pain, some stiffness of the joints remaining. He complained of nausea at the beginning, but had no other ill effect from the medicine. After February 25th the acid was given in ten-grain doses three times daily until March 2d, when it was discontinued and tincture of the muriate of iron, twenty drops three times daily, was ordered. The patient complained of pain, slight in character and fugitive, till March 10th, when he was entirely well.

CASE III. C. W., waiter, twenty-three years old, entered with a first attack; two of his brothers had had rheumatism. The patient had been sick ten days with severe pain in the knees, ankles, and loins. Three weeks before, he had contracted gonorrhœa, and at the time of his admission he had a slight urethritis. The heart was normal. Temperature 100°. From January 24th till February 13th he was treated with Chambers's mixture and opiates. The pain still being very troublesome, he was placed on salicylic acid, ten grains every hour during the day. The following morning he was entirely relieved. The acid was continued in ten-grain doses every two hours until February 18th, when it was discontinued. The patient complained of nausea during its use. Three days later the pains returned in the lumbar region, but were readily relieved by a blister. Discharged, well, March 10th.

CASE IV. C. R., washerwoman, thirty-seven years old, entered with a first attack February 4th, having been sick four days. Her mother had rheumatism. On entrance, the patient's knees, shoulders, and elbows were very tender, but not swollen. The heart was normal. Temperature 100.7°. February 12th she was placed on salicylic acid, ten grains every hour while she was awake, and this treatment was continued till the 19th. The pains diminished during that time, though the drug caused headache, ringing in the ears, and constipation. She was discharged on March 2d, relieved.

CASE V. D. C. entered hospital February 9th. His mother died with heart disease. He had been sick ten days; his hips, shoulders, and wrists were affected. Temperature 100.9°. He was placed on Chambers's mixture till the 12th, with decided improvement. Temperature 99.3°. The Chambers's mixture was then discontinued and salicylic acid was given, ten grains every hour while the patient was awake.

February 13th. The morning temperature was 98.2°; pulse 76. Evening temperature 97°; pulse 54.

February 14th. The morning temperature was 98.5°; pulse 60.

February 15th. The acid was given in ten-grain doses every two hours.

February 17th. The patient was doing well in every respect. The acid was given three times daily.

February 19th. Free from pain. Acid omitted. No return of pain.

March 1st. Discharged, well.

CASE VI. A. A., seamstress, has had several attacks; entered hospital February 11th; three days sick; hips and knees severely affected. Temperature 101.5°. Aortic systolic murmur.

February 12th. Was placed on salicylic acid, ten grains every hour. She

received the first dose at eight P. M., and this was repeated every hour till eleven P. M., when she became perfectly free from pain.

February 13th. Freedom from pain continues, though joints are tender on pressure. Catamenia appeared last night, though not due till March 1st. The acid was continued.

February 14th. Free from pain. Slept well; ringing in ears and slight degree of nausea last evening. She objects strongly to medicine.

February 15th. Joints can be flexed without pain. A. M. Pulse 80; respirations 28; temperature 99.6°. P. M. Pulse 100; respirations 20; temperature 100°. Catamenia very profuse. Acid omitted; ordered fluid extract of ergot. five drops every hour; this checked the flow. There was no return of pain.

February 26th. The patient was discharged, well.

CASE VII. N. D., housemaid, thirty years, entered with a third attack February 28th. On the 23d her knees, hips, back, elbows, and fingers were affected. She now complained of pain in the knees and fingers; the knees were swollen. There was a mitral systolic murmur. P. M. Pulse 100; respirations 28; temperature 100.2°. Salicylic acid was given in ten-grain doses every hour while the patient was awake. This treatment was continued till March 1st. She now refused it, as she was troubled with headache and vomiting, with steady continuance of pain. The acid was omitted, and tinctura ferri muriatis, twenty drops three times daily, was ordered and continued till March 16th, when it was omitted. Pain entirely gone.

CASE VIII. A. B., painter, thirty-six years old. Father died with rheumatism. Patient has had three attacks; entered the hospital February 2d, having been sick twelve days. At time of entrance the ankles, feet, and knees were affected. Temperature 100.2°. He was placed on Chambers's mixture, half an ounce three times daily. The pain entirely disappeared on the 6th, though there was still some stiffness in the joints. He was discharged, well, on the 16th, but reëntered on the 22d. When he resumed his work the rheumatism returned in both ankles, the right knee, and the hip. Salicylic acid was ordered in ten-grain doses every hour while the patient was awake. At the evening visit he complained of vomiting.

February 24th. The acid was now given every two hours. The pain had somewhat diminished. The joints were covered with cotton batting and oiled silk. Patient complained of slight headache; no ringing in ears. There was no tingling of the skin; the tongue was moist and fresh.

February 25th. Complaints of constipation; acid stopped till intestines have been emptied.

February 27th. Acid recommenced this evening, and continued during the night till two A. M., when the pain was relieved.

February 28th. Acid omitted. Ordered tinctura ferri muriatis, twenty drops ter die. No return of pain.

March 5th. Discharged, well.

CASE IX. John S., twenty years old, hatmaker, entered hospital with a first attack March 5th. He had been sick seven days. His elbows, wrists, knees, and feet were much swollen, red and painful; profuse perspiration. Temperature, A. M., 100.6°; P. M., 102.2°. Cardiac sounds distinct; no murmur. Pa-

tient was put into blankets, with cotton batting applied to joints. Ordered salicylic acid, ten grains *ter die*.

March 8th. Temperature 102° . Pains and swelling as bad as ever. Acid omitted. Chambers's mixture, half an ounce *ter die*, ordered. Complete relief followed.

March 20th. Discharged, well.

CASE X. P. M., laborer, thirty years old; has been sick with his first attack three weeks, with pain in the shoulders and arms, wrists, knees, back, and thighs. On entrance, March 10th, the right knee was swollen and painful; the other joints were easy. Ordered salicylic acid, ten grains *ter die*. This was continued till the 17th with entire relief to pain. The acid was then omitted, and *tinctura ferri muriatis*, twenty drops *ter die*, was ordered.

CASE XI. E. H., thirty-five years, a real-estate agent. Entered hospital March 15th, having been sick four days; feet, ankles, and knees were much swollen and very painful. The heart was normal. Ordered salicylic acid, ten grains every hour while the patient was awake.

March 16th. Nausea and repeated vomiting. Medicine omitted.

March 17th. Patient was placed on Chambers's mixture, half an ounce *ter die*.

March 23d. Patient was free from pain.

March 26th. Was up and dressed, though complaining of slight tenderness in feet.

CASE XII. K. H., a housemaid, twenty-three years old, entered the hospital March 1st with her first attack; she had been sick four days; now has great swelling and pain in the knees and ankles. Temperature 101.6° . Salicylic acid was ordered, ten grains every hour while the patient was awake.

March 2d. Patient refuses to take the acid, as she cannot retain it. Acid to be continued in pill with honey. Temperature A. M., 101.6° ; P. M., 103.5° .

March 3d. Temperature, A. M., 101.2° ; P. M., 101° . Nausea and headache. Pain less. Acid continued, in ten-grain doses four times daily.

March 4th. Pain entirely gone. Nausea continues. Temperature, A. M., 99.3° ; P. M., 99.2° .

March 5th. Acid continued, in ten-grain doses, twice daily. Temperature 98° .

March 10th. Acid omitted. *Quinæ sulphas*, gr. i. 3 t. d.

March 18th. Discharged, well.

CASE XIII. F. D., housemaid, nineteen years old, entered the hospital March 16th; she had been sick four days; both feet and arms were much swollen and very painful. Temperature 99.6° . Salicylic acid was given, ten grains hourly while the patient was awake.

March 17th. Acid continued, in ten-grain doses *ter die*. Pains better.

March 18th. Acid continued, in ten-grain doses twice daily. Temperature 98.4° .

March 20th. Pains have nearly gone. Patient wishes to get up.

March 23d. Discharged, well.

CASE XIV. S. S., cigar maker, twenty-seven years old, entered hospital with a second attack March 17th. He had been sick three days; the knees, shoulders, and feet were swollen, red, and painful. The heart was normal. Tem-

perature 102.8°. Patient placed in blankets, and salicylic acid, ten grains every hour during the day, ordered.

March 20th. Pain and swelling entirely gone. Acid continued, in ten-grain doses *ter die*.

March 24th. Acid omitted. No return of pain.

RÉSUMÉ.

- Case 1. No effect from salicylic acid.
2. Alkalies for a month ; then acid, eight doses, with relief.
 3. Alkalies for twenty days without relief ; acid in one day gave relief.
 4. Acid for seven days ; patient well.
 5. Alkalies two days ; acid seven days with entire relief.
 6. Relief after four doses of acid ; this was continued four days. Recovery.
 7. Acid three days without relief. Followed by tincture of chloride of iron for fifteen days. Recovery.
 8. Alkalies gave relief in four days. Recurrence. Acid given four days with entire relief.
 9. Acid three days ; no relief. Alkalies for twelve days. Recovery.
 10. Acid seven days with entire relief.
 11. Acid refused by stomach. Alkalies during eleven days with relief.
 12. Acid for nine days. Complete relief after the first four days.
 13. Acid five days with relief. Discharged, well, in seven days.
 14. Acid seven days ; complete relief in three days.

Except in one or two instances, the salicylic acid was given in wafers.

HALL CURTIS, M. D.

LETTER FROM WASHINGTON.

MESSRS. EDITORS, — The event of this month for the profession here has been the commencement exercises of the three medical colleges. By their united efforts these colleges have succeeded in sending forth thirty-two graduates to swell the list of M. D.'s : Howard University graduated seven, the University of Georgetown thirteen from a class of thirty-seven, Columbian University (National Medical College) twelve from a class of fifty-four. With this irruption comes the annual moralizing in the profession about the multiplying of medical colleges and the advantage or injury thereby to those already in the ranks of practitioners. The reason for the establishment of new medical schools is very easily given ; it is probably found in the same causes here as in other communities, the chief of these being the fear of too great prominence on the part of a few men who hold hospital appointments, and who secure therefrom consultations and corresponding profits. The National Medical College is by far by the oldest of our professional schools ; it is now in its fifty-fourth year, and this certainly entitles it to the respect due to age. It has always pursued the even tenor of its way, disturbed only by the outbreak of the rebellion, which necessitated a temporary suspension. The Medical Department of Georgetown University is now in its twenty-eighth year. It is rumored that there will

be several important changes in its faculty; its oldest professor, who stood at the head of the list upon its organization in 1849 and has retained that position to the present day, Dr. Noble Young, delivered a feeling valedictory at the late commencement, on resigning his post. Other resignations have taken effect or are contemplated. Howard University Medical Department is an institution existing on the broad ground of no fees and no distinction of color or sex.

The question of advantage or disadvantage to the profession arising from a multiplication of schools involves also the consideration of preliminary education, of a proper length of time for study, and of a sufficiently high standard for graduation. The members of the profession not connected with the colleges have the power, if they choose to exercise it, of controlling in these particulars. At present no preliminary education is required beyond the ability to read, write, and cipher, and that is taken for granted. There are students now attending lectures, who are considered as above the average, who have no knowledge of Latin or mathematics, and who, when commencing their studies, had no knowledge of chemistry. Two years and a half of study are really all that is required; the term of three years is the time specified, but a few months make but little difference according to the usual reasoning, and this, too, as applied to men the most of whom work from nine o'clock in the morning to four in the afternoon daily in earning a living at an occupation entirely distinct in its interests from that of medicine. During this time the most are so entirely left to their own resources that it is not unusual to see a man begin the study of medicine with Rindfleisch as a text-book. The final examination is purely oral, with the practical application of such instruments as the forceps, for example, the recognition of pathological appearances in prepared specimens, the description of drugs, and a few chemical tests. At least such is the rule in one of the colleges; but the examination is deficient in that there is no fixed and uniform standard which each candidate must reach. Each examiner fixes for himself an arbitrary standard, and decides within his own mind as to whether the candidate has passed him or not. It is true that every examination must be conducted in the presence of other members of the faculty, but it is very difficult for those who are merely listeners to concentrate their attention upon matters of but little personal interest to them, and which they have in most instances forgotten long ago; it is doubtful whether they take more than a passing interest in an occasional question. These examinations are always confined to the members of the faculty, not even the medical men on the board of trustees of the college itself being present. Under such circumstances it must seem as if examiners with the best of intentions would at times be partial.

Undoubtedly the colleges would appreciate in due time any improvement upon such a system; but where such rivalry exists one institution will not readily take a step which may drive its students to another rival school. It seems imperative upon the medical society here that it shall demand a certain knowledge of the attainments of those graduating in its midst, some of whom are to be consultants with its members. This can be attained only by representatives of the society being present at all of the examinations, and by written questions, the answers to which must reach a certain standard, to be filed

away for reference. If this were done, a very great step in advance would, I think, be taken, and one which would make it easier to follow in the footsteps of Harvard, which insists upon a preliminary examination and a graduated course of study regulated by examinations at certain intervals.

In a previous letter, I stated that a report of Columbia Hospital was in preparation; the report has been published by the Interior Department, and five thousand copies have been struck off, although few have been as yet distributed. It bears the date July 1, 1875, and is an octavo of some eighty pages. The report is solely that of the surgeon-in-chief, there being no reference in any way to other medical men connected with either the hospital or the dispensary, save incidentally. It embraces a summary of the working of the institution from June 30, 1872, the date of the last report, to the present time. The results of treatment which are claimed are very noteworthy; thus, during this period, there were eight hundred and sixty-seven in-door patients and six thousand two hundred and thirty-nine out-door patients, making a total of seven thousand one hundred and six. "Some of the most important operations known to surgery have been successfully performed, and in no case has death occurred as the result of surgical interference. . . . The proportion of deaths to the number treated may be rated as even lower than the death-rate of the general population of the District of Columbia." Following the statistical portion and prefatory remarks, the report comprises detailed cases of fibroid tumors of the uterus and rupture of the perinæum, with observations thereon. Minute details of operations are given to meet the purpose of the report in its "distribution chiefly in country towns and villages." Under the head of fibroid tumors of the uterus, the first ten cases mentioned compose a brief of those reported in detail in a previous report; then follow sixteen more, six of which were treated in private practice, and had no connection with the hospital; and of the remaining ten, eight occurred in the service of the dispensary under the charge of another physician; they are not reported by him, but by the then apothecary and clinical recorder. In two of these cases death followed the introduction of the sponge-tent, which caused in the one instance metro-peritonitis, in the other, tetanus. Under the head of rupture of the perinæum there are said to be sixty successful cases detailed, only thirty-seven of which, however, appear in the report as printed. The report terminates abruptly, and it is to be presumed from this that it is not complete. In the introduction to this part, three or four pages are copied verbatim from the previous report, including a reference to figures which are not given, but intended to illustrate the text. Of the thirty-seven cases of ruptured perinæum, thirty-four are transcribed directly from the previous report.

Apropos of the navy, one of our Sunday papers published on the 12th inst. a circular issued by a committee of officers of the line and intended to be private, which calls for funds from line officers to present a petition to Congress, employ counsel, and in other ways effect a repeal of the six-year clause in the United States navy regulations; this regulation at present allows a staff officer, a doctor for example, on his entrance into the service to take rank with line officers who have served six years, or in other words with ensigns. As the line officer's term of service dates from his entrance into the naval academy,

he is about six years receiving an education at the expense of the government ; while the medical officer must be thoroughly educated at his own expense at the commencement of his term of service. This is said by the line to be liable to abuse, and is highly objectionable to them, but precisely in what manner is not easily understood by those not in the service ; in fact, the whole subject of staff-rank is very puzzling to the civil practitioner, particularly when it comes to giving doctors other titles and a little more or less of gold lace, when considered irrespective of increased pay and other emoluments to which those interested say it is inseparably conjoined. The publication of this circular, it seems, was rather premature, as it has not yet been presented in any shape to Congress, but we shall probably hear more of it before long.

With regard to the army staff rank there is little to be said beyond what has already been published. The consideration of Senator Logan's bill, which meets with approval from medical officers, and which reduces the number of assistant surgeons to one hundred and twenty-five, abolishes the office of medical store-keeper, and allows four surgeons of the rank of colonel and eight surgeons of the rank of lieutenant-colonel, to be promoted by seniority, is anticipated with considerable interest. It was feared that the usual legislation of retrenchment which precedes our presidential elections, with the efforts at false economy for political effect, would fall heavily upon the army this year by cutting down the appropriation for the Army Medical Museum. The sum required is ten thousand dollars, one half of which goes to the library fund and is its only support. If the usefulness of this library were seriously endangered by any legislative action it would become the duty of the whole profession to protest against it, as it is indeed a national repository which is peculiarly accessible to the whole profession. The manuscript catalogue by Dr. Billings enables one to control in a few moments all the journal and special literature upon any one subject, and there are men in the profession here who have access to the library who would be very willing to act clerically as experts in seeking out information for those at a distance. The library of the American Medical Association should in fact be of equal importance, but from present indications it will require many years of slow and tedious growth to attain an approach to such eminence.

The fifth lecture of the Toner course was delivered a few weeks since by Dr. W. W. Keene, of Philadelphia, on the surgical complications of continued fever ; in the course of a couple of months it will be given to the profession as one of the Smithsonian publications. In the case of the young acrobat Pole, mentioned in a previous letter, an appeal to a higher court resulted in a reversal of the decision of the judge, and a pretty plain expression of opinion that Mr. Gatchell, the complainant, had no right under the circumstances to interfere. The boy was remanded to the care of his brothers, who, however, and very inconsistently as it would seem, had to bear the expenses of the trial.

It appears that with the abolition of the old internal revenue tax we by no means got rid of such annoyances ; it is now proposed to levy a personal tax of twenty-five dollars a year upon all members of the profession in the District of Columbia for the privilege of practicing medicine. Homo.

WASHINGTON, D. C., March 14, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING MARCH 25, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	588	29
Philadelphia	800,000	387	25
Brooklyn	500,000	256	26
Boston	342,000	162	24
Providence	100,700	27	14
Worcester	50,000	24	25
Lowell	50,000	20	21
Cambridge	48,000	19	21
Fall River	45,000	34	38
Lawrence	35,000	21	30
Lynn	33,000	22	35
Springfield	31,000	8	13
Salem	26,000	3	6

Normal Death-Rate, 17 per 1000.

THE Association of the Medical Alumni of the University of Michigan was organized in March, 1875. Dr. R. C. Kedzie, of Lansing, was elected president, and Dr. W. F. Breakey, of Ann Arbor, secretary. It is urgently requested that all who learn of the organization will promptly forward to the secretary their own address and that of any alumni they may know; also the names of any they may know to have died, with any interesting facts of their professional lives, and of the time and place and circumstances of their death.

MESSRS. EDITORS, — In the last number of the *JOURNAL*, page 364, I referred to a single case of extreme relaxation of the symphysis pubis from pregnancy, and not to "cases," as I was reported to have said.

Yours truly, J. B. S. JACKSON.

BOOKS AND PAMPHLETS RECEIVED. — Urinary Calculus. A Synopsis of Thirty-Seven Cases treated. By W. F. Westmoreland, M. D. Read before the Georgia Medical Association, April, 1874. Atlanta. 1874.

Medical and Surgical Memoirs, containing Investigations on the Geographical Distribution, Causes, Nature, Relations, and Treatment of Various Diseases. By Joseph Jones, M. D., Professor of Chemistry and Clinical Medicine, University of Louisiana. Volume I. Observations on Diseases of the Nervous System. New Orleans. 1876.

The West Riding Lunatic Asylum Medical Reports. Edited by J. Crichton Browne, M. D., F. R. S. E. Volume V. London: Smith, Elder, & Co. 1875.

A Manual of the Diseases of the Eye. By C. Macnamara, F. C. U., Surgeon to the Westminster Hospital. Third Edition. Philadelphia: Lindsay and Blakiston. 1876. (From A. Williams & Co.)

Clinical Lectures on Diseases of the Heart and Aorta. By George William Balfour, M. D. Philadelphia: Lindsay and Blakiston. 1876. (From A. Williams & Co.)

Royle's Manual of Materia Medica and Therapeutics. By John Harley, M. D., F. R. C. P. F. L. S. Sixth Edition. Philadelphia: Lindsay and Blakiston. 1876. (From A. Williams & Co.)

Animal Parasites and Messmates. The International Scientific Series. By P. J. Van Beneden. With Illustrations. New York: D. Appleton & Co. 1876. (From A. Williams & Co.)

The Student's Guide to the Practice of Midwifery. By D. Lloyd Roberts, M. D., M. R. C. P., Lond. Philadelphia: Lindsay and Blakiston. 1876. (From A. Williams & Co.)

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XCIV. — THURSDAY, APRIL 13, 1876. — NO. 15.

THE BELFRY MURDER CASE.¹

BY B. E. COTTING, M. D.

ABOUT five o'clock in the afternoon of May 23d, last, I was called to Mabel H. Young, a little girl five years and two months old. She had just been found in a church-tower, and had received great injuries. These injuries were then supposed to be the results of a fall.

The child had been taken home ; her clothing had been removed, and she was put into bed. Her face and head were severely bruised, but no injury whatever could be found on any other part of her person. She was lying on her back, uttering every few moments distressing screeches, such as are sometimes heard in affections of the brain with effusion. During these paroxysms there were convulsive movements in the fingers, and, in less degree, in the toes also. At other times the fingers were contracted firmly upon the palms. She was unconscious, and apparently insensible to outward impressions. Her pulse was about 125 or 130, by estimation ; the breathing was not unnatural ; and the skin was moist and otherwise normal.

On further examination, there was found a swelling of the upper lip, with a very small and indistinct ecchymosis towards its right side. The soft parts of the nose were crushed down to a level with the cheeks, the right of which was somewhat swollen ; and a clot projected slightly from each nostril. The skin over the nasal bones was bruised, not broken ; but there was a deep ecchymosed depression at their juncture with the cartilages. These seemed almost completely separated from their natural attachments, but here also the skin was unbroken. The eyes were open, apparently without vision ; there was not any squinting or fixedness of the eyeballs ; the pupils were rather large, but responsive to light ; each eye was somewhat bloodshot at the lower and inner angle near the nose.

The top of the head was greatly swollen ; beginning on the forehead about a finger's breadth above the eyebrows, and extending over the whole vertex and down the right side to a level with the ear. The scalp was puffy, and seemed almost fluctuating. The skull could be readily felt to be fractured in various directions, with crepitus marked and abundant.

¹ Reported to the Roxbury Society for Medical Improvement, February 17, 1876.

With the assent of the family, and the approval and assistance of Dr. Read, who had accompanied the child to her home, I removed the hair from the scalp, to ascertain by further exploration whether any surgical operation would be required. The top of the head was pretty uniformly swollen and rounded, but on the vertex, a little to the left of the median line and nearly over the coronal suture, there was a faint irregular ecchymosis about half an inch in diameter, under which the scalp was much softer than in any other part. Indeed, there was here found a furrow about an inch in width and two or more in length, into which the extended finger could be pressed nearly or quite its whole thickness. The furrow had a general direction obliquely from before backwards, being bounded on its posterior border and extremity (at ff' and c)¹ by a hardened edge, giving (as is not uncommon in similar cases) the sensation of bony depression at that point. Under this furrow the bone seemed to be comminuted. From the angle at c , and in the direction ce , a fracture ran down the left side of the head. About an inch behind the soft space, and nearly parallel with it, was another fracture ($dghij$), which, crossing the vertex, extended indefinitely to the right side towards the base of the skull. There were two fractures running nearly at right angles with the last mentioned on the top of the head; and above the level of and a little behind the right ear was still another, the posterior angular portion of which was tilted outward so as to be quite perceptible to the touch. No depression could be found of any portion of the fractured parts, and it was very evident that surgical interference was neither required nor justifiable. Such extensive injuries were considered necessarily fatal, and the case was pronounced hopeless.

Dr. Read informed me that he had visited the place where the injuries were received, and that the idea that they were produced by a fall was utterly untenable, for the child was found in the *belfry*, the highest accessible place in the steeple of the church. On this statement, and as there appeared evidence of several blows which seemed to be the result of intentional violence, I asked for another witness, in view of the probability of legal investigations, and Dr. Cheever was called. With him, I went again over the whole case, and made a thorough examination of the child's person and clothing. On the straw hat which the child had worn there was a depressed mark about an inch wide and from two to three inches in length, the posterior edge of which was clearly defined, straight, and more deeply indented into the substance of the straw than elsewhere. This inch-wide mark was duller or less shiny than the parts surrounding it, and there seemed to be particles of dust imbedded into the surface. With the hat in position as usually worn, this mark corresponded exactly with the furrow in the scalp before mentioned.

My consultants having withdrawn, I remained an hour or two longer

¹ See diagram on page 412.

to administer to the child and to study the case. The result of my investigations as communicated to the officers of justice that night, while the case was still supposed by the family to be one of accident, and before I was aware of any suspicion outside to the contrary, was that in my opinion several blows had been intentionally inflicted; that the instrument was a strip of hard board, or billet of heavy wood, having a striking surface of about an inch in width, with edges slightly smoothed off, and a surface somewhat dusty; that the blows were short, quick, of great initial force, but resilient or limited, as when one would break a nut's shell in order to preserve the kernel, and not as when one would drive home a wedge or a nail. Blows of the latter character, with sustained and prolonged force, would have driven in the broken fragments of bone and crushed the underlying soft parts much more than in the present instance. These views, then freely expressed, are now thus minutely detailed in view of subsequent developments.

The treatment could be only palliative. Cloths wet in cold water were applied to the head. A teaspoonful of a solution of bromide of potassium, eight grains to the ounce, was directed to be given every hour while the screaming continued. About seven grains were thus given, when on the subsidence of the paroxysms the drug was discontinued. In anticipation of the retching which frequently ensues on concussion, and the probability of blood having run from the posterior nares into the stomach, an infusion of senna was prepared, and about a fluid ounce was taken towards the following morning. A partially successful attempt was made to raise into place the depressed cartilages of the nose.

About daylight of the following morning (the 24th), the child's cry became more natural; for a few moments she seemed to hear, but could not be made to understand anything, or to notice objects presented to her. Towards noon she had two dejections, apparently the effect of the senna. At noon, she seemed to be failing. The pulse became very rapid and feeble. The tumefaction of the scalp subsided perceptibly, and the whole head soon took on a comparatively shrunken appearance. She sank away gradually through the afternoon, and died, without struggle, at ten minutes before eight P. M., twenty-eight hours after the infliction of the injuries.

Autopsy, twenty hours after death, by Dr. W. P. Bolles, pathologist of the Boston City Hospital. The following are his notes: "No signs of injury except to head. Feet inverted. Fingers contracted, semi-flexed. Ecchymosis on lip, across bridge of nose, and also in conjunctiva at the angle of each eye. On the vertex, about an inch and a half to the left of the median line and directly above the tip of the left ear, there was a depression in the scalp, on top of which was a superficial abrasion. There was a sharp projection of the parietal bone, one inch

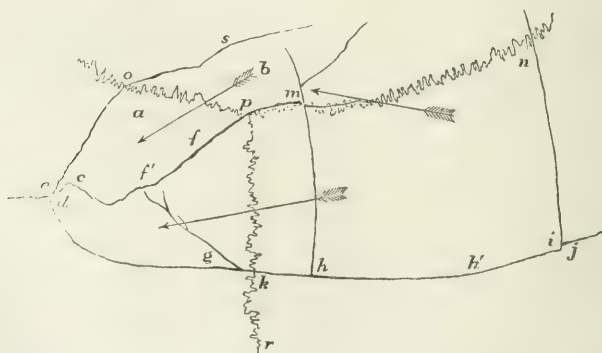
and three quarters above, and one inch and one quarter behind, the tip of the right ear. On dividing the scalp, there appeared an extravasation into the cellular tissue over the entire vertex from just above the eyebrows to the occiput, and on both sides nearly to the ears. On the right side there was also an effusion beneath the temporal fascia. There was a comminuted fracture of the skull, having its central point somewhat upon the left side of the vertex, occupying an irregular quadrilateral from two to three inches in length, from whose posterior corners a long fracture upon either side extended downwards towards the base of the skull. On the right side a horizontal fracture towards the temporal portion joined the last named.

"At the base of the brain was a slight increase of meningeal fluid. On the right side, under the projection above spoken of, there was a rent one inch long in the dura mater, with a laceration of and an ecchymosis in the brain tissue. Upon the left hemisphere, between the termination of the fissure of Sylvius and the longitudinal fissure, there was an effusion beneath the pia mater; and beneath this the brain tissue was both lacerated and ecchymosed. The substance of the brain was pale, but no further lesions were discovered.

"There was an extravasation of blood beneath the skin of the bridge of the nose. The nasal bones were not fractured, but the cartilages were somewhat loosened, depressed, and partially detached.

"Excepting a slight congestion of the posterior portion of the right lung, all the other organs and parts of the body, but those above mentioned, were healthy."

The accompanying diagram, reduced to one half from a full-size photograph by Black, and from actual measurements of the skull itself, will give a better idea of the number, position, and extent of the fractures than can be conveyed by words alone.



The coronal suture is indicated along *o p n*, the sagittal from *p* to *r*. From *e* to *h*, the portion represented comes into vision on looking at the

top of the skull, which must be turned a little to show that from *h'* to *j*. The distance from *k* to *s* is two and one half inches; from *f* to *o* one inch and one eighth; *h* to *i* three inches; *i* to *n* and beyond rather more than three inches; the long fractures from the left base upward by *e* to *d* four inches, and from *d* by *g k h h' i j* to right base nine inches, or thirteen inches together. The arrows indicate the supposed direction of the blows, the arrowheads marking the probable points of greatest violence.

The skull, as now preserved, shows an imperfectly parallelogramic fracture at *s o c f p b*. This was directly under, and corresponded in general dimensions with the softened furrow in the scalp, as well as with the mark upon the straw hat. In that portion of this fracture (*a*) posterior to the coronal suture both tables were completely broken through, while they were not so thoroughly separated at the anterior and right extremity (*b*). This fracture is generally shelving off through the inner table, taking a larger portion of it than of the outer, except perhaps immediately under the sharp indentation in the hat and along the edge in the scalp (*f f' d*) hardened as before mentioned. Here the fracture is more direct and clean-cut. There can be no mistaking these combined appearances at this place as the result of a single blow.

As to the question whether the other fractures were the result of the same or of other and subsequent blows, there can be little room for any great difference of opinion. Still, as the point has been raised, it may be well to give the reasons for believing that there were other blows, or one at least, subsequent to that already described.

In the first place, then, all the remaining fractures are clean-cut, broken squarely off through both tables. This was rendered possible by the opened space caused by the first blow, which had to drive in the tables one upon the other, and to rend away the inner table rather than to break it off. In the second place, while the long fracture on the left side of the head may be and probably is a continuation of the first (that is, along *c e*), the other long fracture (*d g h k i j*) across the vertex to the right temporal region, is not a continuation of the first nor of that of the left side, but connects with these two (at *d*) from a different direction and in a curved line; so that it appears to me that this long fracture across the vertex must have been from a second blow posterior to and in a slightly different direction from the first. This view is strengthened by the existence of a fracture starting from this portion (at *g*), and another (at *h*) at nearly right angles with *g h*, which two do not seem to belong in any possible way to the results of the first blow. Thirdly, the stellated and indented appearance of the various fractures about the point *m* (noticeable particularly in the skull itself and in the photograph, but not easily shown in a wood-cut), the continuation of the posterior right lateral fissure (*h i*), the horizontal fracture above the

ear, and the tilting outward of the fractured bone at the point of juncture of the last two (at *i*), all seem to demonstrate, quite irresistibly, another and a third blow at or near this place (*m*) as necessary to produce such a condition of the parts.

It appears, then, that there were at least two, if not three, blows on and about the top of the head. That there were more than these is not impossible, by any means. The bruised state and great swelling of the whole top of the head, and along its right side, most marked immediately after the injuries, tend to corroborate this view.

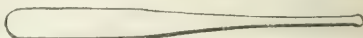
The blow upon the nose is admitted by all to have been still another and a separate affair.

In view of these indications, and of the fact that there was discovered, in the room under the belfry where the child was found, a bat of dimensions and weight capable of being an instrument to cause such injuries,¹ and also a little pool of blood of hand's-breadth size, having a homogeneous clot such as would result from half an ounce to an ounce of fresh blood — in view of all these indications the following seems to me a plausible theory of what took place in that church-steeple on that Sunday afternoon : —

That after her arrival by the closed stairway into the empty room under the belfry, the little victim was seized by the right upper-arm near the elbow, and the first and severest blow inflicted on top of hat and head with the edge of the bat, a blow which marked the hat, crushed the scalp in the furrow, and broke the skull under it; that the end of the bat reached only to the end of the fracture (at *e*), and did not extend beyond the contour of the head; that this blow was not directly vertical; that on the receipt of this blow the child fell, or, limp and flaccid, was still held up by her arm; and that in such position the other blows were given, as they clearly could have had as their pivot a man's shoulder, while the shifting directions of the rolling head of a stunned child might change each time the line of impingement, as indicated in the figure by the arrows. The length also of the instrument as ordinarily grasped (say at mid-handle) accords with such supposition. It will also be noticed that the swellings and fractures all indicate that the blows came from the right side. The last blow, while the child was near the floor, missing the head, hit the nose, and was immediately followed by nose-bleed. If, now, the child was left on the floor while the murderer ran up the ladder to open the trap-door to the belfry, as is quite a natural supposition, there would be time enough for the blood found upon the floor to have flowed from the nose, the bleeding in such injuries being usually instantaneous and very soon over.

¹ The bat is of ash, of the shape shown in the figure. Its length is two feet and six inches; its

width three inches, tapering midway to its handle; its thickness one inch and a sixteenth; its weight one pound and seven ounces.



Taken thence to the belfry as hurriedly as possible, stunned and senseless, the child was left for dead, high above any probable search or chance of discovery. Her involuntary screams, less than a quarter of an hour later, made known her concealment to the neighborhood, already in alarm on account of her disappearance.

The arrest and conviction of the sexton are matters of general notoriety.

A CASE OF TRAUMATIC SEPARATION OF THE SYMPHYSIS PUBIS, WITH FRACTURE OF THE FEMUR.

BY GEORGE W. GAY, M. D.,

Surgeon to the Boston City Hospital.

ON Saturday night, September 18, 1875, George H. B., a healthy marketman, aged twenty-four, while trying to climb into the second-story window of his father's house, fell from the water-spout to the sidewalk. He was intoxicated at the time of the accident, and had not fully recovered from the effects of the liquor when brought to the hospital the next morning.

The following injuries were found on examination: The right thigh was broken at the middle of the shaft. The symptoms were crepitus, shortening, eversion, and a distinct hinge at the point of injury. The patient had complete retention of urine, with hæmorrhage from the urethra. Bloody urine was drawn with the catheter.

Swelling and tenderness were present in the right groin, extending from the symphysis pubis half-way to the anterior superior spine of the ilium. The point of greatest tenderness was at or near the symphysis. The right side of the pelvis was movable, but there was no crepitus. When the right ilium was pressed backward, the pubic bones could be easily separated to the extent of half an inch. This motion was distinct and unmistakable, and was recognized by several medical gentlemen during the patient's first week in the hospital. A well-marked depression or groove could be felt at the junction of the pubic bones, both externally and with the finger in the rectum. The patient could slowly abduct his left leg, but he could not adduct it, nor raise it from the bed. Attempts to do so always produced pain at the symphysis. The rami of the pubes and ischium were not broken, nor were any other fractures to be detected about the pelvis. There was no extravasation of urine. The diagnosis of the pelvic injury was a separation of the pubic symphysis, with a loosening of the right sacro-iliac articulation. The fracture of the femur was treated in the usual way, with coaptation splints and extension. The urine was drawn every six hours the first day or two, when the patient passed it voluntarily, and had no further trouble of that kind.

In a little less than three weeks, a broad firm pelvic bandage was applied to keep the pubic bones in as close apposition as possible. The bandage was not applied earlier as the pressure on the great trochanter disturbed the position of the fragments of the femur.

The extension was removed from the thigh after twenty-five days. There was barely half an inch shortening. The union was quite firm.

The patient was discharged from the hospital at the end of seventy-four days. He could walk without the aid of crutches or his pelvic bandage. The union of the pubic bones was so firm that no motion could be detected, and he felt neither pain nor weakness in attempting to walk. He was advised to keep quiet a month, and wear his bandage several months longer, to insure a perfectly strong and lasting union at the symphysis.

Cases of traumatic separation of the symphysis pubis are uncommon. Sir Astley Cooper reports one case which recovered. A man, while stooping, was struck on the back by a large quantity of gravel, which knocked him down. On attempting to walk, he had violent pain in the region of the bladder, and he passed bloody urine. Pressure upon any part of the ilium caused pain at the symphysis pubis. There was also a fissure at that point the width of two fingers. He remained in the hospital and wore a hip-bandage three months, when he could walk very well, although the pubic bones were not quite in apposition.

Malgaigne has collected four cases of simple separation of the pubes from external violence. Two of them terminated fatally.

Similar lesions occasionally occur during or immediately after pregnancy. They are due to a softening and relaxation of the ligaments and inter-articular tissues of the symphysis. Dr. Fordyce Barker thinks that this condition of the tissues is due to the mechanical obstruction to the return of the venous blood by the pressure of the presenting part of the head of the child. This explanation would hardly seem sufficient to account for the change in those cases occurring early in pregnancy, when the foetal head can exert but little pressure. And, moreover, if pressure of the foetal head alone be sufficient to cause this condition of the ligaments of the pelvis, why is it not a more common occurrence? That it is a very rare accident the experience of every practitioner will testify; and that Dr. Barker's reason is sufficient to account for the lesion in every case will be doubted by many.

That there is some profound change in the tissues in these puerperal cases is evident from the manner in which they occur. In the traumatic cases, great force is required to cause separation of the bones, while in the case of a pregnant woman it may take place suddenly, when the patient is walking on a smooth floor, or making some slight movement. The first intimation she has of any trouble is a rapid giving way of something in the pelvic region, followed by pain and

inability to walk except with great difficulty. In the severest cases, the patients cannot even stand, or allow the weight of the body to fall upon the pelvis.

There is also a marked difference in the time required for the bones to become united in the two classes of cases. Traumatic cases recover quite readily, unless life is destroyed by some injury to the pelvic viscera. Cooper's case was nearly well in three months. The patient whose case is reported at the beginning of this paper was in a fair way to complete recovery at the end of two and a half months. On the other hand, it is only the lightest pathological cases that recover as readily; they often require many months. Barker reports a case that took fifteen years for recovery; and Debout two cases which occupied seventeen and fifty years respectively. In the former class, nature soon rallies from the shock, and sets to work to repair the damage; while in the latter class nature does nothing of the kind till pregnancy is terminated, and in many cases not even then.

The treatment required in both instances is similar, although the puerperal class will generally necessitate its continuance much longer than the traumatic. Rest and a pelvic bandage are the two important elements in the treatment. The rest should be absolute, in bed, and continued at least three months in traumatic cases. The bandage should be firm, and should fit closely. It should be ten or twelve inches wide, and have perineal straps to prevent its slipping upward above the crest of the ilium. It should be worn after the patient gets upon his feet, and as long as he feels any sensation of pain or weakness about the pelvis.

A CASE OF PICA.

BY A. N. GOULD, M. D., CENTRE EFFINGHAM, N. H.

MISS M. E. M. applied to me in August, 1875. She was forty-three years old. Her health had generally been good. She complained of drowsiness; she slept easily in the daytime, especially after dinner. She commenced to menstruate when fifteen or sixteen years old, and was generally regular. Within a year she had flowed very freely, the menstrual flow having at first a "muddy" color, as the patient expresses it, with some red tint; toward the close of the catamenia it was colorless. For two years she had had a longing for innutritious articles. At first she ate charcoal. At present fine sand was craved. Dyspnoea on going up-stairs was marked. The bowels were costive. The tongue was clean. I prescribed compound spirits of lavender, and chloric ether for the dyspnoea, with a laxative and a preparation of iron.

December 12th. I visited the patient at her home. She had taken the medicine as ordered. The appetite for the sand remained. I ob-

tained a specimen for examination. I left about two ounces of carbonate of iron to take the place of the sand, saying that she might take a teaspoonful three times a day.

January 24, 1876. The carbonate of iron was eaten in four days, and the sand eating was again resumed. I questioned her in regard to the amount of sand eaten in a day, and she replied that she could eat a cupful, but feared her supply would fail before winter was over. She ate three or four tablespoonfuls in a day, and there were not many days when she did not gratify her depraved taste, as the habit was too strong to be long discontinued. Her lips were somewhat pale, although she had gained in flesh since the habit was formed. She said that while she had the carbonate of iron she did not want the sand, and that she would give it up if she could have enough of the substitute, although she did not like the latter so well. I ordered two pounds of iron for her especial benefit. She asserted she had eaten "nearly a bushel" of the sand.

She was first seized with a longing to eat the sand when she saw some workmen putting it upon the road near her house. It was only this particular kind that she craved. She laid in a supply for the winter, and baked it to destroy anything injurious that might be in it. She appeared lively, strong, and well. There was some "bloating" at times, but nothing worthy of special notice. I have not had a convenient opportunity to examine the heart and lungs as yet.

RECENT PROGRESS IN THE TREATMENT OF DISEASES OF THE THROAT.¹

BY F. I. KNIGHT, M. D.

Extirpation of the Larynx. — CASE VI. (continued). After our paper which appeared in the last number had gone to press, we received a fuller account of Bottini's case.² The age of the patient is stated to have been twenty-four. Bottini employed local anæsthesia, deeming it imprudent to produce general anæsthesia by chloroform. He expresses a prejudice against the trachea-tampon, which is not sustained by the experience, now extensive, of German surgeons in the use of this instrument. The growth in Bottini's case involved the entire larynx, and was pronounced to be genuine sarcoma, which is of extremely rare occurrence in this situation. Bottini also gives an account of some operations on dogs, from which he removed the larynges by means of the galvano-caustic knife, without the slightest hæmorrhage, either primary or secondary.

CASE VII. — Langenbeck.³ The patient was a man fifty-seven

Concluded from page 393.

Annales des Maladies de l'Oreille et du Larynx, 1875, No. 6, from Giornale della R. Accademia di Medicina di Torino, May, 1875, No. 14.

¹ Berliner klinische Wochenschrift, No. 33, 1875.

years of age, a master-blacksmith, who had suffered about four years from hoarseness and dyspnœa, and had been treated for some time by cauterization of the larynx. A full description of the operation, which was performed July 21, 1875, may be found in the *JOURNAL* of October 21, 1875. The patient was nourished through the œsophageal tube with eggs, beef-tea, and wine. The pulse was highest on the 22d and 24th, the patient having some diarrhœa on the latter day. The evening temperature on both of these days was 103.6°. On the 28th, his condition continued good, and he was free from fever. With reference to the execution of the operation, Langenbeck says that he considers it much better to operate from above downward, the cutting of the trachea being done the very last thing; the important arteries are tied before they are cut, so that the loss of blood may be reduced to a minimum. He recommends that several Trendelenberg's tampon-canulæ should be at hand, in case any one of them should fail. He advises that tracheotomy should precede the extirpation a sufficiently long time for adhesions to take place between the skin and the trachea. In this way, also, we can more quietly and effectually arrange the tamponade.

Trendelenberg's Tampon-Canula. — As reference has been made to this useful contrivance a brief description of it may interest those of our readers who are not already familiar with it. Nussbaum¹ proposed that tracheotomy and plugging up of the larynx through the mouth should precede resection of the upper jaw, anæsthesia being maintained through the tracheal tube. Below and Trendelenberg, independently of Nussbaum and of each other, proposed more elaborate methods of making the tampon. Below proposed that a rubber balloon should be placed between the canula and the vocal cords, which, being blown up, would prevent any blood flowing into the air-passages. Trendelenberg² concluded from his experiments on the cadaver and on animals that such a method as this would not do well on account of the danger of the balloon slipping through the glottis, and also of its provoking cough from irritation of the vocal cords. He devised the tampon-canula, and proved its efficacy at once on a patient. This apparatus, which is introduced into the trachea after tracheotomy, consists of an ordinary tracheal canula, over the vertical part of which a ring-shaped rubber balloon is drawn. This can be blown up through a piece of rubber tubing connected with it and provided with stop-cock, so that it surrounds the canula like a thick roll, and thus obliterates the space between the trachea and the canula.

Artificial Larynx in Case of Stricture. — Dr. Carl Reyher³ has used Gussenbauer's apparatus with satisfaction in a case of laryngeal stricture.

¹ Canstatt's *Jahresbericht*, 1869, ii. 440.

² Canstatt's *Jahresbericht*, 1870, ii. 368.

³ *Archiv für klinische Chirurgie*, xix. 334.

Even if the vocal part of the apparatus is not used, the maintenance of an opening through the glottis by means of the second canula enables the patient to use the whispered voice, which is of course impossible when the stricture remains tight.

Differential Diagnosis and Treatment of the Various Forms of Bronchocele. — Lücke¹ classifies the different forms of bronchocele as follows: (1) struma hyperæmica; (2) struma parenchymatosa, follicularis (Virchow) lymphatica; (3) struma fibrosa; (4) struma vasculosa (aneurysmatica); (5) struma colloides s. gelatinosa; (6) struma cystica (Beck), hydrocele colli (Maunoir).

Simple hyperæmia involves the entire gland. The throat seems larger, rounder, and fuller; the clothes become tight; the larynx is less prominent, and the outline of the sterno-cleido-mastoid muscles is less distinct. The shape of such a throat is by no means uncomely. The hyperæmia usually passes off with the cause (pregnancy, menstruation).

The follicular hypertrophy or parenchymatous struma gives a greater resistance to the touch and a sharper boundary. Some parts are usually more enlarged than others, and are to be distinguished from one another by digital examination. This form rarely attains the size of a small hen's egg in one lobe. The diagnosis depends on moderate size, soft, elastic consistence, and smooth surface.

Struma vasculosa et aneurysmatica belongs to the small or at least moderate-sized bronchoceles. It usually affects the whole gland symmetrically, the form of which is therefore not changed. The most important diagnostic point is the possibility of reducing it to a small size by continuous pressure, which having been relaxed, it fills up again more or less by jerks. The true aneurysmal bronchocele pulsates, and we hear vascular bruits in it.

The colloid form affects not uncommonly the whole gland. The enlargement is symmetrical, and one lobe may become as large as a man's fist. The diagnosis is made from the symmetrical form, and the doughy, almost soft consistence.

The diagnosis of the fibrous form is made from the presence of single hard knots, which can be isolated from one another.

The mixed form most closely resembles the fibrous, but shows a different consistency in different parts. The mixed bronchocele attains the largest size. Those bronchoceles in which the mixture of fibrous and parenchymatous degeneration preponderates are inclined to be pendulous, when small multiple cysts are found in them. When larger cysts form in solid masses, the tumor has usually a broader base.

The diagnosis of the cystic form is made from the fluctuation, eventually also from the transparency, from the globular form of the tumor, and its sharp boundary. Tapping affords the safest conclusion.

¹ Die Krankheiten der Schilddrüse. Stuttgart. 1875.

With reference to medical treatment Lücke says the influence of iodine on thyroid enlargement is not to be doubted, but it is indicated only in tumors containing true glandular tissue. The dose need not be great. Two or three grains twice a day is enough at first. It is best given in simple solution with water.

If the unguentum potassii iodidi is used, a few drops of tinctura iodinii should be added, as the pure, fresh ointment contains no free iodine, and will be efficacious only when it has become yellow, *i. e.*, decomposed. Painting the gland with tinctura iodinii should not be practiced, as the skin is too tender. The injurious effects of iodine on the testicles and mammæ are not easily to be seen.

With reference to the surgical treatment of bronchoceles, it is convenient to consider separately those which are solid and those which contain fluid. The history of the treatment of hard goitres is not much more than a hundred and fifty years old. The ligature of the thyroid arteries was one of the first methods; then came the employment of the seton; later, cauterization, extirpation, and the use of the *écraseur*.

Opinion has constantly changed, so that no one method of treating solid goitres meets with general acceptance. Ligature of the superior thyroid arteries was finally given up on account of the frequency of secondary hæmorrhage, and because at the best only a diminution in size of the tumor was obtained. The seton was often used in the last century, but was given up on account of the frequency of dangerous inflammation, purulent infiltration, pyæmia, and even hæmorrhage. It has been, however, recently again recommended very strongly by Mackenzie.¹ Cauterization and subcutaneous tearing of the gland are both to be avoided, on account of danger. Lücke thinks well of parenchymatous injections of tincture of iodine in the follicular form of goitre, and thinks it acts specifically as well as locally by inflammation and cicatrization.

The most radical operation is obviously removal, whether by ligature, *écraseur*, galvano-caustic loop, or the knife. Surgeons generally dread this operation, and advise against it. Undoubtedly extirpation cannot be practiced on all goitres. The gland must be movable, as a first condition, and must not have too large a base. It is still better, of course, if it is pediculated. Hæmorrhage is considered the chief danger. Extirpation by ligature, *écraseur*, or galvano-caustic loop is dangerous. In all cases in which removal is indicated, it had better be accomplished with the knife.

This operation has been gaining again in favor during the past ten or fifteen years. Lücke says if great care is taken to tie all the vessels peripherally and centrally, there will be little bleeding, and he has never experienced secondary hæmorrhage. Sometimes the operation is very

¹ Boston Medical and Surgical Journal, November 28, 1872.

easy, inasmuch as one may peel out the tumor with blunt instruments up to a thin pedicle. Often, however, as many as thirty ligatures have to be used.

Recently Kocher has proposed to dig out the gland substance. The gland, having been laid bare, is fastened to the edge of the skin on either side; it is then incised, and the gland substance is completely spooned out with sharp spoons and the fingers. The hæmorrhage is profuse and must be stopped by a tampon. This method would be indicated only in parenchymatous and colloid goitres.

One would not expect much from massage. Galvanism is reported to have been successful in some cases (Chvostek).

Treatment of Cysts.—Simple puncture should be made only for diagnosis. Every genuine cyst must be injected with iodine. One should use a trochar sufficiently large, so that small masses may come out. If the cystic fluid contains much sediment, or many granular pieces which have broken off, Lücke considers it very important to wash out the cyst with warm water before injecting the iodine (ten to twenty grammes according to the size of the cyst). The puncture is carefully closed with sticking-plaster or collodion. In many cases cure takes place. Some operators wishing to encourage suppuration, inject a dilute solution of chloride of iron, and leave in the canula (Mackenzie).

In regard to electrolysis Lücke says that in his experience, although the cystic fluid disappeared under electro-puncture, it returned in a week.

Incision of the cyst is well esteemed by Lücke. After an incision has been made down to the cyst wall, this should be stitched to the skin on either side, and the cut into the cyst made between the stitches. If the operation be done in this manner, the bleeding will be less. After the contents of the cyst are evacuated, bleeding from the incision in the cyst wall is best stopped by additional sutures, but bleeding from the interior of the sac must be stopped by plugging with lint. Cure takes place by suppuration, and one must take care that the external opening does not close too soon. Secondary hæmorrhage is the accident most to be feared as suppuration goes on. The vessels cannot usually be found, and plugging up the cavity must be resorted to. Purulent infiltration and septicæmia are also possible, usually, however, only in conjunction with hæmorrhage in persons already enfeebled. In other respects the results of this mode of treatment are very brilliant. Sometimes after the cyst is laid bare the connections with the surrounding tissues may be so loose that it will be better to practice extirpation.

Tonsillotomy.—Saint-Germain¹ speaks strongly against the practice, too common, of trying to excise all enlarged tonsils with the tonsillotome. He says truly that only those which project and have a narrow base

¹ *Annales des Maladies de l'Oreille et du Larynx*, 1875, No. 2.

should be treated in this manner, but that others, sessile, bilobar, and not prominent, should be excised with the bistoury and long forceps, made for this purpose. Otherwise an insufficient amount is removed from the gland.

AIR AND ITS RELATIONS TO LIFE.¹

THIS little book aims to present, in what the author calls a "light and popular" manner, information concerning the composition of the atmosphere and its important and essential relations to life and health. The style of the work is very clear and pleasing, and the absence of technical scientific terms conspicuously adapts the volume to the general reader. The writer's purpose to impart a summary of the knowledge with regard to the properties of the air has been fulfilled very satisfactorily. To be sure, we do not find much that is positively new and original; but the ability to condense and define and compare the researches of others, to discriminate between the false and the true so as to present an exact and impartial view of existing knowledge, is an accomplishment of no mean order.

The information imparted by the book has to do principally with the chemistry of the air, and comprises the discussion of the properties of the various atmospheric constituents, illustrated by experiment and demonstration. But there are numerous instances in which the author has turned aside to point out the significance of the various elements with regard to health and the vital processes. Thus, he gives considerable space to the principles and practice of ventilation, to ground-air, and to the germ-theory of disease. All these subjects he treats in a very comprehensive manner. We may remark, however, in passing, that he seems to us to give undeserved weight to the ventilating force of the transpiration or diffusion of air through the apparently solid, though really porous, walls of buildings — a principle long ago demonstrated by Roscoe, and more recently reiterated and confirmed by Pettenkofer. This source of air-renewal is entirely inadequate; and while no one can doubt its existence after the experimental tests which Pettenkofer has applied for its demonstration, it is nevertheless more curious than useful with regard to ventilation.

The last two chapters of the book are devoted to a discussion of the germ-theory. The author places himself unreservedly with the believers in that theory. He quotes Pasteur admiringly, and has considerable to say in disparagement of Dr. Bastian's well-known views and experiments. Sometimes, indeed, his style of argument with regard to his opponents transcends the didactic and becomes pungent, as, for example, when he says of Bastian that "he reasons from premises that he has not first established;" and, again, "If on the one hand, we are asked to believe the arguments of Dr. Bastian, we cannot admit his experiments; and on the other, if we are asked to believe his experiments, we cannot assent to his arguments; but as his reasoning and his experiments should both be in harmony, we see that he has failed completely

¹ *Air and its Relations to Life.* By WALTER NOEL HARTLEY, F. C. S., Demonstrator of Chemistry and Lecturer on Chemistry in the Evening Class Department, King's College, London. New York: D. Appleton & Co. 1875.

to make a case." In truth, we have found in these closing chapters a special satisfaction, because of the clearness with which the positions of the combatants concerning the germ-theory are defined.

RECENT PROCEEDINGS OF THE ROXBURY MEDICAL SOCIETY.

WILLIAM P. BOLLES, M. D., SECRETARY.

DR. COTTING presented a case of fracture of the skull and showed the specimens. (See page 409.)

DR. CHEEVER, in commenting upon Dr. Cotting's case, referred to the points brought out at the trial, and especially to the principal one whether the injuries could have been produced by a single blow or not. The theory that they were produced by the accidental fall of the trap-door, as brought forward by the counsel for the defense, of course required that a single stroke could do all the damage. All the experts were agreed, however, that the blows upon the skull and nose were entirely distinct from each other, and must have come in different, though not opposite directions, and therefore could not have been such as the falling trap-door would have given. The blow upon the face came probably somewhat from above downwards, those upon the skull at right angles to its surface. A child's skull has been placed under a model of the trap-door in every imaginable position, but no one was found in which it was possible to inflict two injuries bearing similar relations to those in the case at hand. Dr. Cheever further believed that the injuries to the skull were produced by several separate blows.

DR. ARNOLD was satisfied, from an inspection of the specimen, that several blows must have been required to produce the various fractures.

DR. BOLLES agreed in the main with Drs. Cotting and Cheever, but thought it not absolutely necessary to assume a multiplicity of blows to explain the fractures of the skull, considering it possible to produce such an injury by one blow of sufficient force and quickness, yet he thought it equally probable that more than one were given. In case several were assumed, he did not quite agree with Dr. Cotting's location of them.

Retarded Union of Fracture due to Syphilis. — DR. ARTHUR H. NICHOLS read a paper upon this subject, illustrated by the following case. The patient was an intelligent gentleman, aged thirty-nine, an officer in a cavalry regiment during the recent war, possessing an exceptionally fine physique, with great muscular development. In the month of February, 1874, he slipped and fell upon an icy sidewalk, producing an oblique and slightly comminuted fracture of the tibia at a point two and one half inches above the malleolus. The fracture was properly reduced, and the parts maintained in apposition by the ordinary and appropriate treatment. At the expiration of five months an imperfect, cartilaginous union only was obtained; and though the degree of motion between the fragments was not so extensive as to preclude the possibility that some slight attempt at ossification had been made, the seat of the fracture was, nevertheless, indicated by a depression in place of a callus, the

flexibility of the limb at this point being well marked. It did not appear that this failure of reparation, which is of such very rare occurrence, could be attributed to any of the common causes of false joint after fracture. The fracture was not a compound one; nor was the injury of a crushing character, by which the vitality of the bone is known to be annihilated or impaired. There was nothing in the age or apparent condition of the patient calculated to prevent consolidation. The direct supply of blood to the injured extremity had not been cut off by any injury to the main arteries, nor was there any suspicion that the nutrition of the limb had been interfered with by tight bandaging. The patient, indeed, admitted that during the early part of his confinement to bed there had been considerable involuntary motion in the limb at night; but where there is no great displacement of the fragments it is not commonly thought that any ordinary amount of motion at the seat of fracture can seriously interfere with a reparation of the bone. At all events, this motion could have exerted no influence in preventing the subsequent consolidation of the cartilaginous union. Upon further inquiry into the constitutional tendencies and personal history of the patient, the fact was elicited that there existed the most unequivocal signs of *syphilitic contamination*. About five years previous to the date of the injury, he had contracted what was pronounced a true Hunterian chancre, which was followed by a specific affection of the throat, glandular enlargements in the neck, and the loss of hair. He received at that time appropriate treatment, and at the expiration of two years (having in the mean while been assured that he was cured), acting upon the advice of his physician, he married. His wife, who previous to marriage had enjoyed perfect health, subsequently gave birth, at different times, to three children, born at full term, each of which manifested the usual external signs of syphilitic infection, living but a few days. The wife, moreover, herself gave evidence of specific infection, having suffered from ulcerated sore throat, partial alopecia, and chronic headache, while her general physical condition had greatly deteriorated. In view of this evidence, therefore, that the system of the patient was still laboring under the influence of syphilitic virus, it seemed not unreasonable to conclude that the nutrition of the injured limb had been thereby unfavorably influenced, resulting in some morbid change at the point of fracture, by means of which a soft and flexible substance had been thrown out in place of the normal compact structure, a pathological phenomenon well known to occur where fracture is co-existent with phthisis or with pregnancy. The anti-syphilitic treatment was accordingly adopted, combined with salt-water baths and horseback exercise, with the result that at the expiration of two months a very decided improvement was perceptible, while at the end of six months bony union appeared to be perfect, and the full use of the limb was regained. Although it was a matter of some doubt as to the influence exerted in this instance upon the consolidation of the fracture by the presence of syphilitic virus, the case seemed, nevertheless, worthy of presentation as illustrative of a connection which has long been supposed to exist between two lesions bearing no apparent connection to each other, and deriving especial importance from the medico-legal questions to which injuries received under similar circumstances might give rise.

Fracture of Rim of Pelvis; Hæmorrhage from the Bowels on the Third Day. — DR. SEAVERNS reported the case. On September 16, 1875, at seven A. M., was called to see D. M. Found him in bed, suffering great pain. Pulse 90; nervous agitation extreme. Stated that during the previous night he was knocked down and severely kicked on the hip. On examination, a contusion about two inches long over left hip was visible, and on manipulation crepitus was apparent, and it was evident that a portion of the rim of the pelvis was broken off and turned in. The fragment was quite movable, every motion of it giving him great pain, but could not be turned out into its proper position.

The patient's knees were drawn up, and lateral motion of them moved the fragment; upon extending them carefully, the piece became less mobile, and the patient expressed himself as feeling more comfortable. Has passed water freely, unaccompanied by blood. In the afternoon the patient was still suffering greatly; a jacket was made to fit around the pelvis, and towels folded over the abdomen placed under the jacket to prevent motion of the fragment. One natural dejection. Opiates pro re nata.

Dr. John Homans saw the patient the next day, confirming the diagnosis. Fragment not clearly defined on account of the patient being a large, muscular man, but seemed to extend from just above the inferior spinous process backward to the middle of the rim of the pelvis. Patient had five loose dejections, and urinated freely.

On the 18th patient was still very restless; bowels still loose, but no blood in urine or fæces.

On the 19th the patient was more comfortable. Pulse 72. Had had three bloody dejections, the first two largely composed of coagulated blood, the last with some fresh blood and blood specks.

From that time no further hæmorrhage took place, and the patient improved steadily. The fragment continued to be somewhat movable until the 27th inst., and on the 30th it seemed quite firm, and his recovery followed rapidly. At that time the fragment was still tilted in, although less so than at first. Patient not seen since.

Partial Separation of the Placenta. — DR. GOSS reported the case. A woman, twenty-two years old, had been mother of two children, and had an abortion last April, soon after which she again conceived. Uterine hæmorrhage began about the middle of October and lasted until January, at intervals. January 3d she passed a large clot, but had no further hæmorrhage at that time. Upon examination, Dr. Goss found the womb enlarged to the size of seven months. The fætal heart could be heard, as well as the placental souffle. Patient feeble. A few days after this, labor began, the head presenting. When the os was partially dilated, one of the pains produced a sudden gush of blood; Dr. Goss then dilated, ruptured the membranes, and the labor progressed naturally. The child weighed three and three fourths pounds. The placenta was then removed, although somewhat adherent. From the continuance and time of the bleeding it was considered to be a case of partial separation.

Scarlet Fever, Acute Rheumatism, Peri and Endo Carditis, and Acute Nephritis; Partial Recovery, Relapse, and Death. — DR. BOLLES reported the case. A little girl of seven years, bright, and in perfect health, was taken ill

with scarlet fever of an unusually mild type. The symptoms were characteristic, but light: vomiting, a little headache, pulse somewhat raised, temperature about 102° , slight soreness and considerable redness of the throat, general and distinct eruption, and in a few days an unmistakable strawberry tongue. Within a week desquamation began. She sat up in bed (but did not get out of it); she seemed to be doing well, and gave every promise of a rapid recovery, when she began to complain of her arms, which, she said, ached. This trouble, at first light, increased until the eleventh day of her sickness, when it had developed into a well-marked acute rheumatism, with thirst, dry tongue, hot skin, and swelling, tenderness, and pain of both wrists and one ankle. The tongue, at first white, afterwards became dry along the middle and white at the sides. Temperature 103.5° . Pulse 132. There had been a little cough for a day or two, but it was troublesome only as it jarred the inflamed joints. The urine was made slightly alkaline, and kept so for a few days.

Two days after, she passed a very restless night, with pain in her side and "stomach," and was uneasy and greatly distressed. The pulse had risen to 144; the temperature, however, was not high. A loud pericardial friction could be heard all over the chest, drowning every other sound except a pleuro-pericardial rub, which was heard either at that time or very soon after. The little patient was at this time a truly pitiable sight, the distress for breath and that around the heart prompting her to frequent changes of position in order to relieve it, while the tenderness of her joints made movement almost impossible.

There was also about this time some local inflammation of the left lung; for two days after this were noted "fine râles on the left side," and once or twice after this they were noticed again. At no time was Dr. Bolles sure of dullness there, although one day it was noted as suspected. During the next ten or eleven days she went along with the usual symptoms of acute peritonitis, such as accelerated breathing and pulse, and vague, sometimes definite distress in the left chest. There were also frequent attacks of distress referred to the stomach, and vomiting. There was no great dyspnoea at this time, and the appetite was unusually good.

Eleven days after the beginning of the pericardial trouble the friction sounds had almost disappeared, those which remained being mostly pleural, and a loud, hoarse, endocardial murmur had taken their place, either having just begun or being perhaps uncovered by the disappearance of the other sounds; there was occasional distress in the bowels. Pulse 144. Respiration 50.

The râles were still present in the left lung. For the next three or four days she grew worse, the same symptoms increasing, as the following note will show: "Heart's action tumultuous, murmur loud, and sometimes musical. Vomiting, distress in bowels, a little fluid in abdomen. Pulse 152. Respiration 80." Next day she preferred to sit up, and on the day following could not lie down. This was the twenty-seventh day of her sickness, and from this time until death, forty-seven days later, orthopnoea had never been absent.

Up to this time her urine had not been affected, but now it was greatly diminished in quantity, and thick and white with urates, but without albumen or casts. It was passed but once a day, not more than three ounces at a time,

and once not a drop was voided for more than twenty-four hours. The dyspnoea was becoming distressing; she could neither lean back nor forward nor toward one side for an instant, but either sat in her father's arms or rested her chin in his hand, and took short, miserable naps in that way. Her tongue was covered with aphthous sores, dry, round, and clumsy. She could say only one syllable with each breath, and that became at last unintelligible; thirst and cough were constant; she groaned incessantly, and vomited what little food she could be forced to eat; her appetite was entirely gone, and her spells of retching were frequent and long. The legs were rapidly swelling, and the face was puffy and shining. Tracheal râles and subsultus were present, and her death was daily expected. The heart-murmur was constantly changing from loud to low, and rough to smooth, but always, when well defined, heard with the systole, and best at the apex. Then albuminuria, blood, and casts appeared, and the urine gradually increased in quantity. The pulse ranged from 120 to 160, and the respiration attained a maximum of 80.

The orthopnoea slowly diminished for about five weeks, during the latter half of which time she was very comfortable, and gave promise of quick recovery. She ate and drank well, and played all day; there was no pain and no vomiting or distress. The albuminuria had gradually diminished, and finally both albumen and casts had for two or three days entirely disappeared. The cough, however, was still present and pretty troublesome; râles could be heard in both chests, especially on the left side, and there were dullness and bronchial respiration on the left. She always rested by lying over the rail of the left side of her crib, or in some such way, so as to bring the left lung below.

After apparently passing through all these troubles safely, nearly nine weeks from the beginning of her sickness, and four from the first appearance of albumen and casts, and several days after they had disappeared, she was a second time taken with vomiting, pain in bowels, suppression of urine, and blood, while albumen and casts returned, and all the previous symptoms became aggravated. The œdema became excessive, the breathing short and shallow, and at the last the superficial veins were swollen, the lips livid, and death occurred seventy-four days from the beginning of the fever.

Autopsy. — There were about four ounces of fluid in the peritoneal cavity, twelve ounces in the right and eight in the left pleural cavities. There had been no pleuritis upon the right side, but the left lung was bound by a number of pretty strong adhesions, and the left side of the pericardium was adherent to the side of the chest by its pleural surface, holding the heart somewhat to the left. The lungs were œdematous. The pericardial sac was obliterated by adhesion of its walls, which could be separated, however, by a little force. The heart was enlarged by dilatation, and flaccid. The mitral valve bore a ring of little vegetations entirely surrounding its opening. Kidneys large, pale, "coarse-looking," not examined microscopically, but evidently considerably degenerated.

THE SEWERAGE OF BOSTON.

THE Board of Health of Boston, after repeated petitions, succeeded last spring in getting a commission appointed to report a plan for relieving the bad condition of our sewerage. This commission reported three months ago. Ample time has passed in which to criticise its conclusions, but no serious attempt to overthrow them has been made by any person of good information. The plan proposed rests, in brief, upon the following points. First, rejection of "dry removal," and of the "pneumatic method," as involving too many elements of uncertainty, and offering probabilities of pecuniary failure. Second, remedying the low grades of Boston by building an "intercepting sewer" of great size at a still lower grade than the other sewers of the city, the sewage being raised to a sufficient height for discharge by pumping, somewhere near the point of exit. Thirdly, the removal of the point of discharge to a part of the harbor where (it is believed) the tide will carry sewage quite out to sea before the flow. Thus the present sewers will be enabled to discharge a continuous current, and matters thrown in after breakfast will reach the ocean before night on the same day, while the choking of sewers by sediment is prevented, and no time is allowed for the decomposition of matters and consequent generation of poisonous gases in the sewers. And, moreover, no sewer will henceforth be permitted to discharge upon the coast line of Boston; all their contents will be taken down to Moon Island.

The programme is very clear; the objections made to it are not so clear. One thing, however, is evident: this measure, so essential to the health of our city, is in danger of being passed over, not from indifference, not from a spirit of active opposition, but from the fact that it involves an expenditure larger than our municipal government is in the habit of incurring for such objects. The members of the government are not yet willing to take the responsibility, but there is good reason to hope that if they were assured of the support of the citizens they would vote this indispensable measure at once. The action of the Health Department of the Social Science Association in calling a public meeting at the City Hall is therefore deserving of great commendation. It has succeeded in increasing the public interest, and in getting the question of sewerage definitely placed before our citizens as the most important local question of the day. We were glad to see that the medical gentlemen who spoke were strongly of the opinion that the "park question" ought not to be considered as at all connected with the question of sewerage. Such a connection might be fatal to the success of a scheme of a sanitary value far higher than that of a park could possibly be. This meeting is the first of a series which will be held in different parts of the city, with the same object in view. It is to be hoped that the interest thus aroused in this important project will throw the weight of public opinion so strongly in the scale as to remove all doubts from the minds of those who are now hesitating. A careful study of the causes which have led to the present lamentable condition of the sewerage of a peninsula like Boston, possessing unusual natural advantages for drainage, and of the measures for relief proposed, would be instructive to all who take an interest in sanitary science.

MEDICAL AFFAIRS IN JAPAN.

UNDER the heading Modern Medical Progress in Japan, the *Medical Times and Gazette* of March 4, 1876, gives an interesting abstract of papers contributed to the *Berliner klinische Wochenschrift* by Dr. Wernech, of Jeddo. The new clinical hospital at Jeddo, a temporary building, though occupying a space of ground nine hundred feet long and six hundred and seventy feet wide, contains only about one hundred and thirty medical and the same number of surgical beds. The rest of the ground is occupied by laboratories, theatres, etc., connected with the school. The buildings are *more Japonico*, of but one story. Wood is the material almost entirely used in the construction of the hospital, and in consequence of the combustible nature of the buildings all the scientific instruments and apparatus, as well as the collections of anatomical and pathological specimens have to be kept in special fire-proof rooms apart from the rest of the hospital. The wards are low, dark, and too much dependent on chance for their proper ventilation. Too much air blows in in winter through the cracks and openings around doors and windows, while in summer it is difficult to get air enough. Other causes intensify the defects of ventilation: the use of braziers, containing hot ashes, by patients and nurses to warm their hands; the smoking of tobacco by every one, even by the patients, unless they are in contact with the doctor; and the water-closets, which "are erected in inconceivable numbers in all possible and impossible places" in the hospital. According to the old system, the patients used to lie fully dressed, or else clad in a padded robe, *on the ground*, and the physician had to stoop over or kneel by any one whom he wished to examine. Now, however, beds have been introduced, but a number of trifling ceremonies have to be gone through with if a patient has to assume an attitude other than his ordinary one. The Japanese furnish themselves with all kinds of books, flowers, etc., to make their time in the hospital pass pleasantly, and every bad case has a special nurse to attend on it day and night; nor do the numerous staff interfere with one another, although there may be six or eight nurses to as many patients in a moderate-sized ward.

Some of the Japanese customs are peculiar. If a sick child enters the wards, a whole family comes with him, surrounds the child's bed, and there remains until he gets well. The friends of patients come in to see them at all hours, even when the doctors are on their rounds, but they behave so quietly and with such politeness that they give rise to much less interruption than would otherwise be the case. This politeness manifests itself in various ways; for instance, if a patient is ordered by the doctor to suspend his smoking, even for an hour or two, he frequently leaves the hospital, or else, if an out-patient, refuses to come in. He does not, however, make the smoking-grievance the ground of his refusal, but states either that his father is dead, or that he has some urgent business to attend to which will occupy him several days.

MEDICAL NOTES.

— It is our painful duty to record the sad and untimely death of Dr. Alfred L. Haskins, of this city, on the 3d instant. On the afternoon of that day he visited at the Huntington House a patient who lived on the fifth story. A few moments later he was found fatally injured, lying at the bottom of the deep well around which the stairway winds. For some weeks previous he had been the subject of great mental depression, which had been either produced or greatly aggravated by professional disappointments following close upon one another and culminating, after an exciting contest, in his failure to obtain an object of life-long ambition. It must not be inferred, however, that Dr. Haskins's career was in any sense a failure, although in the struggle for existence in a profession greatly overcrowded it may, at times, have seemed so to him, as it has to many another who has ultimately reached posts of honor. His industry and abilities were recognized at an early age by rich and influential friends, who enabled him to acquire a university education. Having graduated at Amherst College he entered the Harvard Medical School, where he earned a good name with his teachers for fidelity. He enjoyed the advantages of a pupilage at the Massachusetts General Hospital and of a prolonged stay in Europe, spending most of the time in Vienna. He began practice ten years ago, most thoroughly prepared for the work before him. During this short period he had served in several honorable positions, and at the time of his death was superintendent of the Boston Dispensary, having previously served in several of its departments. He was also connected for a long time with the out-patient department of the City Hospital. This certainly was a record most satisfactory for a career so short. The testimony of his friends given at the inquest showed his mind to have been clearly deranged, and pecuniary difficulties and bitter professional opposition to have greatly aggravated this condition. It seemed impossible to determine whether his fall was caused by a sudden attack of vertigo, or was purely accidental. His aged mother, we are sure, will have the warmest sympathy from his very numerous friends in the profession for her terrible bereavement.

— The Ninth Annual Report of the Board of Trustees and Officers of the Minnesota Hospital for Insane for the year ending November 30, 1875, shows that at the beginning of the year there were three hundred and eighty-one patients in the institution. The number admitted during the year was one hundred and eighty-eight, and the number remaining at the close of the year was four hundred and thirty-four. The superintendent, Dr. Cyrus K. Bartlett, in referring in his report to the necessity of further accommodations for the insane of the State, discusses the advisability of the plan of separate institutions for chronic and acute cases, or, as is generally expressed, incurable and curable subjects. He thinks such a plan is unwise, impracticable, and inexpedient, and that a better and in the end more economical plan would be to provide suitable hospitals for all classes of insane patients within reasonable distances of the centres of population. For purposes of lighting the hospital, gas

manufactured from naphtha has been recently introduced. It is estimated that the expense of this gas will not exceed three dollars a day for three hundred burners.

— At a recent meeting of the Pathological Society of Philadelphia, as reported in the *Philadelphia Medical Times* of February 19, 1876, Dr. Bertolet exhibited cases illustrating the regeneration of nerves after excision. The portions of reproduced nerves were derived from the musculo-spiral and the radial. They both exhibited the button-like cicatricial neuromes, the central swelling in both specimens being markedly greater than that of the distal end. The intermediate regenerated part of the nerve measured over an inch in the former, and nearly two inches in the latter specimen; in both cases it presented medullated nerve-sheaths and sharply-defined axis cylinders, and was indistinguishable microscopically from a perfectly normal nerve, thus showing how complete the reparation had been.

— Dr. E. T. Robinson reports to *The Medical Record* of March 4, 1876, a case in which apomorphia was successfully used. His patient, a boy three years old, accidentally swallowed a bi-convex, lens-shaped tin whistle. It was found to be lodged near the cardiac terminus of the œsophagus. This canal was completely closed, as was shown by the vomiting of any food he attempted, to take, but none of the contents of the stomach was ejected with it. One twelfth of a grain of apomorphia was administered hypodermically in the patient's arm. In three minutes the emetic quality of the drug was manifested by pallor. The boy was then placed in bed, flat on his belly, when, after three or four violent attempts, the whistle, together with the contents of the stomach, was expelled.

— *The Richmond and Louisville Medical Journal* for January contains a biographical sketch of the late Dr. John Davis Jackson, of Danville, Kentucky. He was born in 1834, received his academic education at Central College, and attended his first course of medical lectures in the medical department of the University of Louisville. He graduated in 1857 at the University of Pennsylvania. At the breaking out of the war he was established in a good practice, which he abandoned to enter the Confederate service. After the war, he became the leading physician of Danville. He found time, however, to pass a season in New York, and subsequently to visit Europe for the purpose of prosecuting the study of his profession. His health began to fail in 1873, and last winter was spent by him in Florida. Although he was at Louisville during the last meeting of the American Medical Association, his health prevented his attendance at any of the sessions, and resolutions of sympathy for his illness were passed by the association; at that meeting he was elected first vice-president of the association for the ensuing year. He died on the 8th of December last. Dr. Jackson was held in high esteem by his professional colleagues, if we may judge from the wide-spread feeling of regret for his early death, and the numerous expressions of respect for his memory.

— The effect of medicines upon the teeth is discussed by J. F. P. Hodson, D. D. S., in a communication to *The Medical Record* of February 1, 1876. The writer, while admitting that the teeth often decay during sickness, is persuaded that the exhibition of acid remedies has comparatively little to do in

causing their destruction. The acid condition of the secretions of the mouth which occurs during any illness involving a feverish condition, the high temperature of the buccal cavity at such times, and the fact that little attention is apt to be paid during sickness to keeping the patient's teeth properly cleansed, all combine to favor the decay of the teeth. To prevent the occurrence of this misfortune the physician should insist that proper attention should be paid to cleansing the teeth in sickness. The acid condition of the secretions of the mouth may be neutralized by causing the patient to rinse his mouth frequently with some alkaline solution, such as lime-water, diluted according to the sensitiveness of the mucous membrane, and flavored with a few drops of winter-green or peppermint, or to rub prepared chalk freely about and between the teeth and allow it to remain during the night. When acid medicines are administered, the mouth should be immediately afterwards thoroughly rinsed with lime-water or a solution of bicarbonate of soda; in this way the evil effects of any acid remedy upon the teeth will be entirely obviated.

BOSTON CITY HOSPITAL.

MEDICAL CLINIC.

[SERVICE OF DR. HALL CURTIS.]

Phosphorus Poisoning. — I. C., a well-built, healthy-looking man, twenty-three years old, entered the hospital March 21, 1876, with the following history. Deserted by his wife and unable to obtain work, he had the day before entrance walked to South Boston, a distance of twenty-six miles, having a supper of bread and milk, his only meal that day. Tuesday morning he bought at an apothecary's in South Boston a box of rat poison, "said to contain arsenic, but having a smell of matches." This he mixed in a glass of beer and drank at nine A. M. During the day he took no food. At five P. M. he noticed pain at the epigastrium, which persisted, growing more severe, and at last accompanied by vomiting.

He entered the hospital sixteen hours after the poison was taken. When first seen by the house-officer he was walking about the ward, complaining of great pain in the epigastrium and right hypochondrium, with constant retching. An emetic of mustard and warm water caused very free vomiting, but nothing peculiar was marked in the vomitus. Sulphate of magnesia was given hourly in small doses till the bowels were moved, and a mustard poultice was placed over the epigastrium.

March 22d. At the visit he was half sitting up in bed, his face pale and cool, three ecchymoses on lower lip, tongue slightly coated, no jaundice, epigastrium somewhat tender, legs and feet warm, respiration tranquil, pulse 70, great thirst, constantly drinking water that was soon ejected. He complained of the pain and the vomiting, though these symptoms were not present at the visit. He seemed pretty comfortable, though depressed. He was ordered milk and lime-water diet, with an ice-bag to stomach. The vomiting and pain persisted

during the day and night. At four A. M. March 23d, the house-officer found him collapsed and failing rapidly. Temperature 97.8°. Respiration 52. Pulse 130. No pulsation at radials. Stimulants were given by rectum. He died at 4.30 A. M., forty-six and a half hours after taking the poison. The autopsy was made by Dr. Bolles on the 24th, with the following results :—

"The changes noted at the autopsy were, a small amount of serum in the arachnoid space, with some dullness of the arachnoid over the hemispheres, and slight congestion of the pia mater. Brain normal. The heart was pale and soft, and had several small hæmorrhages under the pericardial surface of the auricles. Its muscular tissue was slightly yellowish and soft, but not friable; its cavities contained considerable soft-clotted blood. The peritoneal surface of the small intestine, especially in the upper half of the abdomen, was congested. The stomach contained three ounces of thick, greenish-yellow matter, partly consisting of milk, partly perhaps of mustard. The small intestine contained also a considerable quantity of similar but more bronze-colored matter. Neither the stomach nor the small intestines appeared inflamed or congested. The liver was not enlarged or inelastic, but both externally and internally it was of a bright golden-yellow color. Kidneys pale, the tubules indistinct, with a yellowish tinge between the cortical and medullary portions. The contents of the stomach and intestines were given to the hospital apothecary, who reported the chemical evidences of phosphorus, but no arsenic. Phosphorus was also found in the urine. Dr. Edes examined the liver, heart, and kidneys microscopically. He found in them all excessive fatty degeneration, and had never seen kidneys so uniformly fatty."

Persistent Jaundice ; Hepatic Enlargement ; Rapid Elevation of Temperature ; Death.—John S., aged fifty-seven, entered the hospital March 22d. Twelve years ago he had an attack of yellow fever. Otherwise he has always been well until the autumn of 1874. He became dizzy and uniformly jaundiced; then followed loss of muscular power. He was unable to walk, or even turn in bed. This condition has continued until the present time, with occasional slight improvement in strength. He has been free from pain.

March 23d. In bed. Tongue covered with a thick, scaly, brown crust. Conjunctivæ yellow. Skin universally very yellow. Hepatic dullness in mammary line five and one half inches. The edge of the liver could be felt projecting below the ribs; it was smooth and regular, but tender on pressure. No enlarged or indurated glands were noticed. No enlargement of veins, no œdema. Heart-sounds distant and irregular; no murmur; mucous râles at base of right back; constipation; vomiting yesterday. He was treated with nitro-muriatic acid and compound infusion of gentian. Pulse 100. Temperature 102.5°.

March 25th. Pulse 96. Temperature 100°. P. M. Temperature 98.5°.

March 26th. Temperature, A. M., 104°; P. M., 104.5°. During the night he had a rigor, with delirium. At the visit he was found rather dull, but rational, answering very slowly and in a low tone. The pulse was small and intermittent. Skin covered with profuse perspiration.

His condition remained the same till the 29th, with the temperature varying from 99° to 101° A. M., and 103.7° to 104.2° P. M. This day the extremities

became cold. Ecchymosed spots appeared on the lower lip, and he gradually failed.

March 30th. Frequent vomiting. Slight amount of ascites noticeable. An erysipelatous inflammation of nose. At eleven A. M. rigors, followed by death at eight P. M. Autopsy not allowed.

The "Chambers's mixture" alluded to in the last report is as follows:—

R̄ Potassæ acetatis,	āā 3i.
Potassæ bicarbonatis	3 xv. M.
Aquæ	

HALL CURTIS, M. D.

THE TREATMENT OF INSANITY.

MESSRS. EDITORS,—Dr. Wilbur, superintendent of the idiot asylum at Syracuse, and formerly for nearly twenty-five years at the head of a state insane asylum, has just published an interesting account¹ of a recent trip to Europe, which is worthy of very general attention and careful consideration. The report is written in a fair spirit, without any disposition to exaggerate faults or virtues in asylum treatment, either at home or abroad.

According to Dr. Wilbur, the chronic insane increased six per cent. in New York during the year 1871; and this leads him to a discussion of the curability of insanity, which is the fairest that I remember to have seen in print. Statistics are fallacious on this point; in one asylum the same patient was credited with five recoveries in several years. About forty per cent. generally get well, but perhaps half of these remain permanently so. It has been said and often repeated of late that early treatment by sending patients to asylums will secure ninety per cent. of recoveries; and the statement has been based on the fact that a large proportion of those so treated in the first few weeks or months of the disease get well, whereas the reverse is true of long-standing cases. Dr. Wilbur shows that the patients who are usually sent to asylums early are those in whom violent acute symptoms develop rapidly, and who would, most of them, get well under any sensible treatment. In the slow insidious cases, the patient more rarely gets well, whether at home or in an asylum. The statement would be made forcible if we used lung diseases for a comparison. The cases sent to hospitals early (pneumonia, pleuritis, etc.) get well in large numbers. For those who come late (consumptives) we can do little else than prolong life; could we do much more if they came earlier?

The general features of English asylum-life described by Dr. Wilbur are tolerably familiar to the readers of the JOURNAL. He says,—

"To one familiar with American asylums or hospitals for the insane, there are some features in the management of British asylums that especially impress him: the great degree of employment or occupation furnished the patients; the absence of excitement among the patients, and the seldom recourse had to seclusion or any form of mechanical restraints; the large percentage of patients who occupied associated dormitories; the practice of assembling the patients in large dining halls for their meals; the employment of females, in

¹ Management of the Insane in Great Britain. A Report to the State Board of Charities of New York, by H. B. Wilbur, M. D.

many instances, in the care of male wards and as nurses in convalescent wards; the economy of management, seen both in the construction and current expense accounts; the fullness and minuteness of the daily and periodical reports and records of the several officers, and, finally, the thoroughness and efficiency of the governmental inspection through the boards of lunacy of the three kingdoms.

"The two points first named, that is, the general employment of the patients and the absence of excitement, seem to be related as cause and effect, and were always so spoken of both by the superintendents of the institutions and the members of the boards of lunacy."

In the fifteen asylums visited, Dr. Wilbur found sixty-eight per cent. of the patients employed, in this agreeing with the observations of Dr. Edward Jarvis made a dozen years ago. A large proportion of the patients were taught trades after being admitted to the asylums. The following interesting list, showing the disposal of the patients for one day in the asylum of Dr. J. Crichton Browne, is given with a commendation as to the efficiency of their labor.

WEST-RIDING LUNATIC ASYLUM.

MALE DEPARTMENT, JULY 26, 1875.

Number of patients employed in out-door occupation.....	181
Number of patients employed in brew-house.....	9
Number of patients employed in engine and gas-house.....	7
Number of patients employed in blacksmith shop.....	4
Number of patients employed in plumbing.....	2
Number of patients employed as joiners.....	9
Number of patients employed in shoemaking.....	15
Number of patients employed in tailoring.....	24
Number of patients employed in weaving.....	25
Number of patients employed in upholstering.....	6
Number of patients employed in knitting.....	19
Number of patients employed in tin-smithing.....	2
Number of patients employed in painting and papering.....	5
Number of patients employed in book-binding.....	3
Number of patients employed in stone-masonry.....	3
Number of patients employed in mining.....	3
Number of patients employed in whitewashing.....	4
Number of patients employed in picking hair or other occupations.....	49
Number of patients employed in kitchen and wash-house.....	20
Number of patients employed in assisting in wards.....	142
Total employed.....	532

MALE PATIENTS UNEMPLOYED.

Sick or too feeble.....	18
Aged and infirm.....	45
Too low-spirited.....	31
Too much excited.....	47
Too little mind.....	25
Able but unwilling.....	10
Total unemployed.....	176
Total number of males.....	708

FEMALE DEPARTMENT.

Employed in laundry and wash-house.....	65
Employed in passages and kitchen.....	67
Employed in sewing.....	223
Employed in knitting.....	40
Employed in cutting-out room.....	8
Employed in cleaning wards.....	82
<hr/>	
Total employed.....	485
Total unemployed.....	214
<hr/>	
Total number of females..	699
<hr/>	
Percentage of patients employed.....	72

Dr. Wilbur speaks of the great benefit of employment in allaying excitement among the insane, and reminds the reader that it is, in England, the substitute for "mechanical restraint," so much used in this country. He alludes to the benefit obtained in so many English asylums from removing the prison appearance by abolishing, in a large degree, bolts and bars. Under the more liberal treatment of the insane themselves and frequent inspection by the commissioners of lunacy, the strong prejudice that formerly existed against asylums has gradually given way to a different feeling.

With American superintendents the subject of mechanical restraint is a tender one. Their reasons for using it so largely are that they think the American more excitable and less easily controlled than the Englishman, and that insanity assumes a more severe type here. They say also that there are more accidents under the non-restraint system. Impartial observers do not by any means all agree with the first proposition. As to the second, Dr. Wilbur shows that, in 1874, seven accidental deaths and five suicides occurred in twenty British asylums, taken at random and containing fifteen thousand patients; in thirteen American asylums containing three thousand five hundred inmates, of which the statistics are given in the report for 1875 by the Commissioner in Lunacy of New York, twelve suicides occurred; no mention was made of other casualties.

The writer concludes with an earnest recommendation for the establishment of boards for inspecting asylums, similar to those now existing in England, a necessity for this country of which Dr. Bucknill has recently spoken most forcibly.

We would have been glad to see more in this excellent report in regard to medical education in asylums, training of attendants and nurses, pathological research, and facilities for the individual treatment of acute cases in small buildings, points in which other countries are far ahead of us.

There are above twenty-five thousand insane in the asylums of the United States; there must be nearly or quite as many in private houses and almshouses. The subject, therefore, is one which we cannot afford to neglect, and all such papers as Dr. Wilbur's should be welcome contributions to a good work.

C. F. F.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING APRIL 1, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	587	29
Philadelphia	800,000	391	25
Brooklyn	500,000	231	24
Boston	342,000	156	24
Providence	100,700	33	17
Worcester	50,000	24	25
Lowell	50,000	21	22
Cambridge	48,000	13	14
Fall River	45,000	14	26
Lawrence	35,000	17	25
Lynn	33,000	14	22
Springfield	31,000	14	23
Salem	26,000	8	16

Normal Death-Rate, 17 per 1000.

MESSRS. EDITORS, — I desire to call the attention of the readers of the *JOURNAL* to an advertisement in your columns of an elastic rubber water-bed. My personal experience of its use in a case of iliac abscess has convinced me that not only the comfort of the patient was secured, but the great ease and equable support given to the projecting bones had a favorable effect upon her strength. A further proof of the benefit which this kind of bed affords to a person obliged to lie for a long time in the same position is given by the fact that during a wakeful night the patient was not once moved for seven hours, though previous to its use she was turned over as frequently as once in every two or three hours. This bed has been in constant use by my patient for nearly four weeks. Yours truly, SUBURBAN.

MESSRS. EDITORS, — The undersigned respectfully requests those gentlemen (especially those outside of Boston) who have not responded to the circular recently issued asking for information respecting post-diphtheritic paralysis, to report the total number of cases of diphtheria treated by them (or the fact that none have occurred within their practice or to their knowledge), even if no paralytic complications have been observed.

The returns already received, which are hereby gratefully acknowledged, show, in the case of many towns, a complete exemption from the epidemic, and it will be interesting to note to what extent this has been the case.

JAMES J. PUTNAM, M. D.

63 MARLBOROUGH ST., BOSTON.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held on Monday evening, April 17th, at eight o'clock, at the hall in Temple Place. Reader, Dr. J. R. Chadwick. Subject, Onanism in Women. Report of the committee on nominations.

BOOKS AND PAMPHLETS RECEIVED. — Review of "Hospital Plans." By John R. Miernsée, Architect of the Johns Hopkins Hospital. Baltimore. February, 1876.

A Treatise on the Diseases of the Nervous System. By William A. Hammond, M. D. Sixth Edition, Rewritten, Enlarged, and Improved. New York : D. Appleton & Co. 1876. (From A. Williams & Co.)

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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RARE FORM OF MONSTROSITY; CASE OF ACEPHALUS.¹

BY HENRY TUCK, M. D.,

Visiting Physician of the Boston Lying-In Hospital,

AND J. B. S. JACKSON, M. D.,

Professor of Pathological Anatomy in Harvard University.

A. B., aged thirty-two, about eight months advanced in her first pregnancy, entered the Boston Lying-In Hospital October 24, 1875, at 3.30 P. M. Pains had come on some hours before, and were weak and irregular. Vaginal examination showed the os uteri to be about two thirds dilated, and the membranes protruding therefrom. Presentation was doubtful. At seven P. M. pains became strong and frequent, and breech presentation was easily made out. At 8.30 P. M. membranes were ruptured, and at 9.40 P. M. the breech was born. No pulsation could be felt in cord, and the head was at once delivered. From the maceration and desquamation of the cuticle of the fœtus it had evidently been dead some days. It was a male and weighed four pounds, well formed in every way. An examination then showed the presence of a second child, but the presentation was not made out. For the next hour pains were weak and irregular. Membranes were then ruptured and the case proved to be a footling, the feet presenting, crossed in the vagina. At 10.45 P. M. I first saw the case. Then the left foot was external to the vulva. The right foot was brought down and traction made, but with no effect. A fillet was attached next, and strong traction made, but I was obliged to desist for fear of tearing off the foot. The fingers passed up over the thighs showed just above them a large mass, thought then to be a sacral tumor. The mass seemed of such size and consistency that by strong traction on the feet the fœtus could be delivered. The fillet was then put upon the right foot, and upon traction being made it at once gave way. An attempt was made to deliver the fœtus with forceps, but they slipped, and no hold could be obtained. Ether was given, and another unsuccessful attempt with forceps made. The thighs were then grasped in a towel, and after repeated and most powerful traction by both the house physician and myself, one keeping up pressure over the uterus externally while the

¹ Read before the Boston Society for Medical Improvement.

other pulled upon the thighs, the fœtus was delivered at 11.30 p. m. It was an acephalous monster, and weighed three and a quarter pounds. The placenta not coming away readily by external manipulation or slight traction upon the cord, the hand was introduced into the vagina and the uterus, of which latter organ there was an hour-glass contraction. This was overcome and the placenta delivered. Patient was then given thirty-five drops of the fluid extract of ergot and fifteen drops of laudanum.

October 25th. A. M. Pulse 120; temperature 100.1°. Slept well. Urine had to be drawn with catheter. P. M. Pulse 112; temperature 100.8°. Patient had no further trouble. Sat up on the tenth day, and on the fifteenth was discharged, well.

Description of the Fœtus.—This consisted of a trunk and two lower extremities. The first terminated superiorly in a large, rounded, fleshy mass, as is usual in this form of monstrosity, of which at least four specimens have been examined here, and reported in the printed catalogues of the museums of the Boston Society for Medical Improvement and of the Harvard Medical School. The form of monstrosity being very rare, it seems a large number to have occurred in this vicinity. The extremities were well developed excepting the toes, of which there were four only on each foot, and upon one of them the two smallest were fused. The whole length of the fœtus was ten and a half inches. Upon the anterior face, and four and a half inches from the rounded upper extremity, was a flaccid mass about the size of a pigeon's egg, covered with integument, and that must have represented the head. Upon each side of this mass, and three and one fourth inches apart, was a small but well-marked dimple-like depression in the skin, which probably showed where the upper extremities would have been if they had existed. About an inch below the fleshy mass above described was the umbilical cord, and by the side of it a protrusion of three or four inches of intestine, which had been covered by a thin membrane that had burst.

An inch or two below the umbilicus was a tolerably developed scrotum, but there was neither penis nor anus. The great mass of the trunk, the greatest circumference of which was fifteen inches, external to the skeleton consisted, as is usual in the acephalus, of a coarse fibro-cellular tissue, very tough and very œdematous, but there were besides in the posterior and upper portion a considerable number of cysts lined by a delicate serous-looking membrane, several of which would have held two or three ounces of fluid. These last have not been reported in any of the cases of acephalus that have been dissected here.

Of the internal organs, the heart, lungs, stomach, liver, spleen, and testicles were wanting, as was also the diaphragm. In the thorax was a large quantity of coarse, white, and very tough fibro-cellular tissue,

with less of the same in the abdomen. The aorta, which was of sufficient size, and in its usual relations to the spine, terminated not far below the upper extremity of this last in several small branches, and inferiorly gave off a large hypogastric artery upon the left side, but the right was wanting. There was a small intestine, nineteen and one fourth inches in length, and terminating superiorly in a cul-de-sac; also a large intestine, that seemed to open freely into the fundus of the urinary bladder. The cœcum was about one half of an inch in length, and sufficiently developed, but blunt, as in one of the lower animals, and entirely wanting the tapering appendage that is to form the appendix cœci. A most conspicuous organ in the abdomen was a large kidney and corresponding renal capsule. The first was situated mainly upon the right side, and the last wholly upon the left.

From the kidney, and at some distance apart, arose two ureters, one of which was more than two lines in diameter and ended near the bladder in a cul-de-sac; the other, which was large throughout, dilated at one part and rather suddenly to the size of the end of the forefinger, and finally opened into the bladder not far from the point of entrance of the intestine. The bladder was of an oval form, about the size of a large nutmeg. Its contents, if there were any, were not ascertained, and it was an interesting negative fact that it was neither distended nor thickened, as it has been found to be in some other cases, in which there was no external outlet. When the intestine was cut across and inflated, the air passed freely into the bladder, ureters, and pelvis of the kidney. The question that arose as to this last organ, whether it was to be regarded as a single one or the fusion of two, seems to be an open one.

The skeleton consisted mainly of a spine, thorax, and lower extremities. The first was well developed so far as it extended. Of the cervical vertebræ, however, there were three or four partially fused or irregularly developed, and the lowest one only was normal. Inferiorly the spine terminated in a most remarkable manner, and in the sacral region. This lower portion ended quite bluntly, and the opening of the vertebral canal was fully one fourth of an inch in diameter. The pelvis was well developed, as were the lower extremities, but the ischia were somewhat approximated and connected by a marked fibrous band.

Of the ribs there were thirteen on each side, well developed, but upon the right side, from the second to the fifth inclusive, they were partially fused.

The sternum was formed in two lateral halves and widely separated, but connected upon each side, as is usual with the cartilages of the ribs. Over the upper left rib was a flattened bone of a somewhat triangular form, one fourth of an inch or more in diameter, which undoubtedly

represented the scapula. Also near the upper extremity of the spinal column, and somewhat anterior to it, was a small curved bone somewhat suggesting the body of the hyoid, or perhaps the lower jaw, its length being six lines or more, and its diameter about two lines.

A CASE OF DOUBLE PLEURISY.

BY F. GORDON MORRILL, M. D.

ABOUT the middle of May last, F. P., aged twenty-seven, a laboring man, began to suffer from pain in his right side, and experienced considerable difficulty in breathing. He managed, however, to keep about until the latter part of July (although unable to do any work meanwhile), when cough, dyspnœa, and general malaise compelled him to take to his bed. On the 2d of August he entered the City Hospital, where he was treated for a large effusion in the right pleural cavity. On the 19th of September he was discharged, but had to take to his bed again almost immediately. After seven weeks of neglect in a cheap boarding-house, he was admitted to the Carney Hospital on November 18, 1875, at which time his condition was as follows:—

Emaciation very marked; countenance pale, and somewhat livid; appetite very poor; tongue red and irritable-looking; bowels irregular, diarrhœa and constipation alternately; had occasional paroxysms of coughing, at which times he raised small quantities of frothy mucus; had occasional chills, not very well marked. There was no albumen in the urine. Pulse 100, weak. Temperature 102° F. Bad night sweats.

On inspection, no difference could be detected between the two sides of the thorax. On percussion there was absolute flatness over the right back from an inch above the lower angle of the scapula to the base of the lung; in front this flatness extended downwards from an inch below the right nipple. Neither respiratory nor voice sounds could be heard an inch below the line of flatness in front or back. Above this line there was exaggerated resonance on percussion and loud respiration in both front and back. The left back was somewhat dull on percussion over the lower third. There was no friction murmur to be heard anywhere, nor any physical signs which could be regarded as pathognomonic of disease of lung tissue. No alteration in the percussion sounds could be effected by changing the position of the patient. Quinine and stimulants were prescribed, together with as nourishing a diet as the patient could bear.

November 28th. An effusion was now present on the left side, equal in extent to that of the opposite side, and a loud friction murmur was audible over the upper lobe of the left lung in front. Pulse 110. Tem-

perature 103° F. The only sleep which the patient had thus far enjoyed was obtained by large doses of chloral hydrate. Since his entering the hospital a sister of the patient had died of phthisis.

November 29th. In consultation with members of the staff, I drew off with an aspirator four ounces of serum from the right side and eleven from the left. The only available needle was too small to allow free exit to the fluid, which was very coagulable serum. The puncture was made between the seventh and eighth ribs in both instances.

November 31st. No relief from tapping; both effusions as extensive as before the operation.

December 5th. The effusion on the left side had increased greatly during the past two days, and there was complete dullness on percussion over left back from the spine of the scapula downwards. In front there was tympanitic resonance on percussion over the upper portion of the lung as far down as the left nipple; below this point there was complete flatness. The right side seemed to be in about the same condition as when the patient first came under observation. The first sound of the heart was heard most distinctly about an inch from the right border of the sternum. There was intense dyspnœa. Pulse 120, feeble.

The aspirator was again used, and a large needle entered between the ninth and tenth ribs, just behind the angles. One hundred and four ounces had been drawn off when cough and distress on the part of the patient compelled me to desist. The fluid (very coagulable serum, as in the previous instance) was still flowing freely when the needle was withdrawn.

December 6th. Marked relief from tapping; patient slept comparatively well the preceding night. Dyspnœa much less. Pulse 105. Some diarrhœa and tenesmus, for which opiate injections in starch water were prescribed.

December 10th. Patient comfortable but very weak. No signs of a return of the effusion, and no diarrhœa. Pulse 115. Appetite very poor; said he could not eat. Friction sounds could now be heard all over left back above the line of last tapping. The first sound of the heart was now heard most distinctly under the left border of the sternum. The condition of the right side was (so far as could be judged from the physical signs) about the same.

December 30th. No change had taken place worthy of notice, except that the patient's strength seemed gradually failing.

January 15th. Patient died at one A. M., having gradually grown weaker since last entry. Had had very little cough since the last tapping, and apparently died of exhaustion. The following is an account of the post-mortem examination by Dr. E. G. Cutler.

Autopsy fourteen hours after death; marked emaciation; fair amount

of rigor mortis. On opening the abdomen the diaphragm was found to be arched as usual, though the highest point on the right was on a level with the fifth intercostal space, while that on the left was on a level with the fourth rib. The right lung was universally adherent; the thickness of the new membrane at the base of the lung was nearly an inch, and gradually diminished towards the apex; in its removal both the visceral and the parietal layers were taken out with the organ. On section the lung was found studded throughout with grayish-white opaque nodules, ranging in size from a pin's head to the end of the little finger. Many of these nodules presented a distinct depression in the centre, and this was especially marked in the larger nodules. At the apex one or two old empty cavities of small size were seen. At the lower part of the upper lobe were two or three cavities the size of the end of the thumb, filled with a fluid of the color and consistency of custard. The left lung was partially adherent, as follows: at the apex and in front down to the second rib, at the side down to the third rib, and behind it was adherent from apex to base. The rest of the lung was free, though the pleural surfaces were covered with a roughened layer of membrane of varying thickness, and connected by a few intersecting trabeculæ with each other. On the surface of these trabeculæ certain gray transparent granulations were seen, which resembled miliary tubercle to the naked eye. About six ounces of bloody serum were found in the pleural sac. On section the lung showed at its apex a cavity nearly the size of a hen's egg partly filled with broken-down caseous matter. The rest of the lung was thickly strewn with nodules like those in the other lung, ranging from the size of a pin's head to the end of the thumb; there was one nodule of catarrhal pneumonia in the upper back part of the lower lobe, nearly the size of a hen's egg.

There was nothing special about the heart or pericardium.

The mucous membrane of the stomach was somewhat pigmented, and at the pyloric half was thickly strewn with many slight elevations, proved by the microscope to be chiefly due to an increase of the submucous connective tissue (*état mamelonné*).

The spleen was somewhat enlarged and had several old adhesions to neighboring parts.

The kidneys were of normal size. Under the microscope there was seen to be cloudy swelling of some of the tubules in parts of the cortex.

There was nothing special about the peritoneum or the rest of the abdominal viscera.

The brain and spinal cord were not examined.

A careful microscopic examination failed to detect miliary tubercles in any of the organs.

Portions from all parts of the lungs, hardened in alcohol and colored

with carmine showed the disease to be chiefly what Buhl describes as desquamative pneumonia. That is, the cells of the alveoli were present in large numbers, swollen up, rounded, and enlarged, seeming to pervade the whole field. Many parts had undergone fatty degeneration. In other sections an increase in the connective tissue was very marked, indicative of interstitial pneumonia; while others again contained (alveoli and bronchioles) parts characteristic of catarrhal pneumonia. On the whole the most generally prevalent was the desquamative process. Numerous small bronchi were met with, surrounded by an increased amount of connective-tissue and filled with a more or less caseous mass (peribronchitis).

The chief point of interest in the case is that a double pleurisy should have occurred not dependent on tubercle for its origin. The lack of physical signs on the right side is fully accounted for by the thickness of the new membrane; and although it may appear singular that the existence of so large a cavity as that which was found at the apex of the left lung should not have been discovered before death, I can only state that the patient was carefully examined by several gentlemen beside myself, and at no time was anything heard beyond harsh respiration until November 28th, when a loud friction murmur was present.

AN INSTANCE OF UNUSUALLY HIGH TEMPERATURE IN A PUERPERAL PATIENT.

BY SAMUEL W. TORREY, M. D.

Mrs. D., primipara, was delivered, naturally, of a healthy infant, at five o'clock A. M., Saturday, March 25th. Patient was very calm and quiet during the labor, and was quite comfortable at my evening visit. Condition normal through Sunday and Monday; temperature 99°. On visiting her Tuesday afternoon, I learned that she had not slept during the previous night, but had been much harassed by the tormenting, irritating pain of prolapsed piles; there also had been considerable pain in the breasts. Pulse not particularly feverish, rather irritable, 106; respiration natural; skin, to the touch, not excessively warm; tongue moist, with slight white coating; temperature, by thermometer under the tongue, at the end of three minutes, 108°; at the end of five minutes, 108.5°. Examination revealed, protruding from the anus, a mass of piles, not inflamed, about as large as a small billiard ball, which, with some difficulty, after prolonged gentle manipulation, I returned through the sphincter. Gave ten drops of fluid extract of *veratrum viride*, and ten grains of Dover's powder. There had been no nausea, no chill, no pain in the abdomen; there was nothing abnormal about the *ochia*, and there was no unusual sensitiveness to pressure over the uterus.

Temperature next morning, 100°; milk flow established; patient quite comfortable. A mild saline cathartic moved the bowels gently, and the only further trouble was due to the relaxed condition of the sphincter, causing an occasional prolapse, which was satisfactorily overcome in a few days, by the use of suppositories containing bismuth and extract of opium. All symptoms of metritis or peritonitis being absent, the fever being removed by replacing the piles, and the flow of milk becoming fully established, lead me to conclude that the exceptionally high temperature was caused by the constant and severe irritation arising from the prolapsed piles, augmented by "milk fever." This case appears to me a good illustration of the value of the thermometer and its frequent application in puerperal cases, the physician's hand proving, as in this case, an imperfect means of estimating the degree of fever present, a due appreciation of which, early, is often of vital importance to the patient.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY R. H. FITZ, M. D.

PATHOLOGY.

Inoculation of Fevers. — The recent occurrence of repeated epidemics of typhoid, typhus, and relapsing fevers led Motschutkoffsky¹ to experiment concerning the possibility of inoculating these diseases.

The experiments were made on men (volunteers), apes, rabbits, dogs, and cats, the material introduced being the blood, milk, sweat, urine, saliva, and excrement of the diseased patient.

The repeated attempts at inoculating typhus and typhoid fevers were unsuccessful. Men were readily inoculated with relapsing fever, the blood only of the material employed transferring the disease; the experiments on the lower animals produced negative results merely.

Some time before these experiments were made, Dr. Münch had successfully inoculated himself with relapsing fever.

In order that positive results may arise, the blood must be taken from the patient during the febrile attack, it being of no consequence whether the spiral fibres were seen or not. Experiments proved the inefficiency of the blood removed during the period of incubation, which lasted from five to eight days, or during the remission. The inoculation of a third person with the blood from a person who had received the disease through inoculation was successful. There was no evidence of an increased potency in the material inoculated, as stated by Davaine with reference to pus. A successful result followed the inoculation of infected blood diluted with equal parts of a quinine solution; the motion

¹ Centralblatt für die medicinischen Wissenschaften, 1876, xi. 193.

of the spiral fibres was stopped in consequence of the admixture. When the blood was diluted with alcohol these fibres ceased to move, and the inoculation of this mixture was unsuccessful.

Fat in Dropsical Fluids.—The source of fat found in fluid exudations into the pleural and abdominal cavities is suggested by Quinke¹ in connection with cases coming under his observation. A man entered the hospital, eight days after being run over by a wagon, with an accumulation of fluid in the right thorax, supposed to be the result of a pleurisy. The liquid removed by tapping resembled milk, and being set aside there was separated a creamy layer, which was composed of minute fat drops. A painful œdema proceeded from the region of the puncture and extended over the corresponding half of the thorax to the middle of the thigh. The swollen subcutaneous tissue being punctured, there escaped a milky fluid, of the same appearance under the microscope as that presented by the pleuritic fluid. The patient died, and the thorax was found to contain a fluid resembling, microscopically, chyle. The normal appearance of the pleural surface, and the absence of pain and fever excluded the idea of pleurisy, and it was supposed that the milky fluid had escaped from a ruptured chyle vessel, though such was not found. The nature of the fluid, and its repeated reproduction with nearly the same qualities, rendered at least probable a very considerable mixture with chyle.

A milky fluid removed from the abdominal cavity of another patient also gave a creamy layer on standing, which was composed of minute fat drops like chyle. The autopsy suggested an accumulation of chyle from the closure or constriction of the smaller vessels and an extensive capillary escape of chyle into the intestinal walls and the abdominal cavity. A peritonitis was the probable cause of this obstruction.

The fluid removed from the abdomen of a case of primary peritoneal cancer appeared milky, and a creamy layer separated. The fat drops in this case were larger than in the other instances, and were often grouped in the form of granular corpuscles, thus evidently resulting from the fatty degeneration of cells. A similar fluid is mentioned by Friedreich as occurring in a case of tubercular peritonitis. Quinke, therefore, concludes that where fat is found in transudations which present a creamy layer on standing, the fat may be due to the presence of chyle, chylous dropsy, or to the presence of fatty degenerated cells, adipose dropsy, and that the latter variety occurs particularly in cancerous and tubercular peritonitis.

Relation between Hepatic Abscess and Injury to the Head.—Bärensprung² has examined the records of the Pathological Institute at Berlin with reference to the asserted coincidence of these conditions. From 1859 to 1873 there occurred seven thousand three hundred and twenty-

¹ Deutsches Archiv für klinische Medicin, 1875, xvi. 121.

² Archiv für klinische Chirurgie, 1875, xviii. 557.

six autopsies, among which were one hundred and forty-six cases of cranial affections, nearly all of which were to be attributed to an injury, and one hundred and eight cases of hepatic abscesses or injuries. A comparison of the two series showed that abscesses of the liver are as frequently associated with wounds or suppuration in other parts of the body as with those of the head. The following are assigned as causes for the hepatic abscesses under such circumstances: the simultaneous action of an external force upon the hepatic region; the effect of *contre-coup* on the liver when a concussion of the whole body takes place; the transfer of septic emboli, either from branches of the vena portæ outside the liver or from the pulmonary veins; finally, the metastatic localization of icorrhæmia or septicæmia.

The last explanation is based upon the assertion of Klebs that all secondary suppurations and inflammations in organs remote from injured parts are produced by the microsporon septicum. Such may result from the immediate presence of the spores in the affected part, or from the transfer there of irritating substances produced by them at the original seat of injury. It is considered that the liver is particularly liable to be affected under such circumstances, from its large supply of blood and its connection with nutrition and the formation of blood. Its relation to certain metals and alcohol, and its ready affection in syphilis, tuberculosis, and cancer, suggest that it may be a place for purifying the blood, and a very sensitive one. The irritating substance in pyæmia reaching the liver gives rise at the outset to a parenchymatous degeneration of the liver-cells, followed by pus-formation.

Bärensprung also directed his attention to the possibility of hepatic abscesses being caused by the immediate gravitation into the hepatic vein of venous emboli on their way through the heart. The inference from his tables is a very direct one. In sixteen out of twenty-three cases of thrombosis of the cerebral sinuses due to injuries of the head there was embolism of the lungs, and in only two of these cases was there hepatic embolism besides. In one of the two cases the liver was directly injured, and in the other the pulmonary affection was older than that of the liver. In thirty-five cases of caries of the middle ear sinus thrombosis was present in fourteen, and the thrombi were often continuous into the jugular vein and in a state of putrid softening. Although embolism of the lungs was present in nine cases, in no instance was there an abscess of the liver.

Arteriitis Obliterans. — Friedländer¹ applies this term to a very frequent affection of the arteries which he considers to have been previously almost unknown. Analogous changes have been observed in veins, but less regularly; they are not so readily detected, and are more often complicated with thrombi.

¹ Centralblatt für die medicinischen Wissenschaften, 1876, iv.

Heubner's¹ description is regarded as typical, but the condition presents anatomically no specific syphilitic qualities, nor is it limited to syphilis. It consists in the origin of a cellular connective tissue within the inner coat of middle-sized and smaller arteries, which leads to a narrowing and an eventual obliteration of their canal. This growth may take place from all points of the wall, thus forming a concentric obstruction, or it may be partial forming a crescentic thickening. It may become vascularized and dense, or may undergo cheesy degeneration. The rule may, therefore, be stated that the wall of the arteries may take part in the condition of their surroundings, that is, in the great group of interstitial processes. According as these are acute or chronic, indurative or cheesy, so do corresponding changes occur in the arterial wall, especially in the inner coat. The process may occur primarily, though rarely. Such instances are the closure of the ductus arteriosus and the umbilical arteries.

Heubner calls attention to the importance of the process in the cerebral arteries. It is of regular occurrence, and extremely developed in the true indurative processes in the lungs, in cicatricial bronchiectases, etc. It is also a very important link in the chain of processes lying at the bottom of pulmonary consumption, it being almost impossible to examine closely a case of pulmonary phthisis without finding a number of obliterated arteries. Those found in the vicinity of cavities are generally erroneously regarded as due to thrombosis; others are seen in the recent lobar and lobular inflammation preceding the formation of cavities. This arterial obliteration may be produced experimentally in rabbits within forty hours after a section of the inferior laryngeal nerves. This observation suggests that the consequent arterial anæmia must play an essential part in the malignant course of the inflammatory process following this operation. It is also evident that the growth in phthisis must bear a direct relation to the increased pressure in the pulmonary artery and the hypertrophy and dilatation of the right side of the heart. The change is found in tumors and their vicinity, in simple granulation growths, in gummosus tumors, and in tubercular growths with the associated inflammatory and ulcerative processes. It is more rare in sarcomas, but frequent in fibrous tumors, and is particularly marked in elephantiasis and the denser forms of cancer.

The newly-formed cells may arise from the endothelium, from the flowing blood or from that in the vasa vasorum. As the condition progresses, it agrees completely with the processes taking place in the organization of a thrombus, so that it may be hypothetically considered that the organization of the thrombus occurs by a process analogous to the obliterating arteriitis or phlebitis.

A similar obliterating process may occur in canals lined with epithe-

¹ Die Luetische Erkrankungen der Hirnarterien. Leipzig. 1874.

lium, as the small bronchi and the excretory ducts of glands, especially the milk ducts. The conditions in these cases are apparently the same, namely, the presence of interstitial processes in the vicinity, as scirrhus cancer, fibrous tumors, or chronic inflammation of the breast. The epithelium is usually destroyed before the process of obliteration takes place.

Diphtheritic Inflammation. — The various stages in the development of this process in the human intestine were observed by Rajewsky. He found that a catarrhal process always preceded the diphtheritis, and that at the outset of the latter a fibrinous exudation is deposited in and upon the mucous membrane. The latter then dies, and is converted into a granular albuminous material; this destruction increases in extent, and at the same time the blood-vessels in the altered tissues undergo a hyaline metamorphosis. Micrococci and bacteria are found in the unaltered tissue and in that which has become granular, isolated in the former, as colonies in the latter. In the earlier stages the lymph-canals of the submucous tissue are filled with the bacteria. In order to determine the relation of the parasites to the diphtheritis and to the hyaline degeneration of the blood-vessels, he made several experiments on rabbits. When fluids containing bacteria were injected into the blood-vessels, an intestinal diphtheritis followed only when an inflammation of the mucous membrane was previously produced. This was done by the injection of a weak ammoniacal solution into the intestine, and then the micrococci became fixed in the intestinal mucous membrane after passing through the walls of the vessel. If either injection solely was made, no diphtheritis of the intestine followed. It was concluded that in intestinal diphtheritis the parasites play an important part, but the soil in which they are to grow must previously be prepared by irritants. This inflammatory change in the mucous membrane is in relation with the hyaline metamorphosis of the blood-vessels.

(To be concluded.)

DISEASES OF INFANCY AND CHILDHOOD.¹

THE second edition of Dr. Smith's work appeared in 1872. As a result of the enlarged experience during the intervening four years, which the author's unusual facilities for clinical study have given him, we find several important diseases treated at length which were omitted in the former editions, and a considerable part of the text has been enlarged and rewritten.

The great importance of the proper feeding of children in health is fully recognized by the devotion of four chapters to the subject of lactation and of artificial feeding.

The author speaks highly of the addition of Hawley's Liebig's food to the

¹ *Treatise on the Diseases of Infancy and Childhood.* By J. LEWIS SMITH, M. D. New York. Third Edition, enlarged and thoroughly revised. Philadelphia: Henry C. Lea. 1876.

infant's milk, made in this country under the immediate supervision of Dr. Hawley, of Brooklyn. Ridge's food and flour-cake are used in like manner at the New York asylum. One objection urged against Liebig's food has been the difficulty in carrying out the directions for making it. Hawley's food does away certainly with that objection, for it is only necessary to mix the dry food with the milk, pure or properly diluted, and after bringing it slowly to the boiling-point, with frequent stirring, the mixture is ready for use. The flour-cake is to be made by boiling two or three pounds of the best wheat flour, crowded snugly in a muslin bag, for forty-eight hours in water sufficient to cover it, the flour to be grated from it after drying. "These three flours," the author writes; "are employed in the New York Infant Asylum with a satisfactory result, but the preference is given to Ridge's food, which seems to agree with the largest number."

The Constitutional Diseases comprise the second part of the book, and are divided into four sections.

Section I., Diathetic Diseases, includes rachitis, scrofula, tuberculosis, and syphilis.

Section II., Eruptive Fevers, includes measles, scarlet fever, r  theln (German measles), variola, varioloid, vaccinia, and varicella.

Section III., Non-Eruptive Contagious Diseases, includes diphtheria, pertussis, and parotiditis.

Section IV., Other General Diseases, includes intermittent fever, remittent fever, typhoid fever, cerebro-spinal fever, acute rheumatism, and erysipelas.

In the chapters devoted to the four diathetic diseases we find a very full presentation of the latest views, and the ætiology and anatomical characters of tuberculosis are treated at great length.

The articles upon the eruptive fevers are particularly good. In the malignant forms of scarlet fever, "which are indicated by a quick and weak pulse, a temperature rising to 105° or higher, drowsiness, delirium, great restlessness, duskiness of the skin, and a languid circulation," the author has found "quinine in large doses" more useful than any other remedy. While it gives more strength to the action of the heart, it diminishes the frequency of the pulsations and reduces the temperature. Three to five grains are given three times daily to a child five years old. When the stomach is too irritable, twelve grains are given in clyster; and if the excessive temperature continue after twelve hours, it is to be repeated. A hot mustard foot-bath or general warm baths containing mustard, the free use of wine-whey or milk-punch, and, if great restlessness, the bromide of potassium, are also indicated." The employment of sweet oil or glycerine, to each ounce of which six or eight drops of carbolic acid are added, is preferred to the ordinary inunction with lard. As a preventive of the spread of the contagion, the regulations of the New York Board of Health are quoted and their enforcement is recommended.

The chapter on r  theln appears in the present edition for the first time, an epidemic of this disease having occurred since the issue of the previous edition.

Of the non-eruptive contagious diseases, the chapter on diphtheria has been entirely rewritten, and of this disease the author says in his preface, "Diph-

theria has become a disease of great importance in this country, desolating many families, my own among others, and snatching away many a child of bright promise. Although of late the profession has acquired a greater insight into the nature of this disease than we formerly possessed, and we are able to treat more successfully its local manifestations, nevertheless there are cases, and not a few, which are attended by early and profound blood-poisoning, which still renders diphtheria the most fatal disease of childhood in the localities where it prevails. Indeed, there is no infectious disease which involves greater danger and in which there are so many modes of death."

Contrary to the usual classification, we find pertussis included in this section instead of among diseases of the respiratory system, but the innovation seems to be a proper one.

The author continues to maintain the existence of a so-called essential infantile remittent fever, excluding from the category all forms symptomatic of a local irritation, or dependent upon malaria, or identical with typhus or typhoid fever. It were to be wished that more space than one page and a half had been devoted to making clear his views and reasons for so doing, but as we are told that "its discrimination from typhus or typhoid is practically of little importance," we may infer that its continuance in the nomenclature of children's diseases is equally so.

The chapter on typhoid fever is one of the shortest and least interesting in the book.

Cerebro-spinal fever appears for the first time in this edition, an epidemic of this disease having occurred in New York since 1872. The chapter constitutes in itself a very valuable monograph, and is the best we know of in any work of this kind.

The third part of the book embraces diseases classified from the point of view of their anatomical characters, and is divided into five sections. These treat in order diseases of the cerebro-spinal, respiratory, digestive, and circulatory systems, and diseases of the skin.

We find simple and tubercular meningitis treated together in the same chapter. The description of the characteristics peculiar to each form is consequently a very confused one. The author, however, attaches but little importance to an accurate separation, for he writes, page 374, "Certain writers describe at length the means of diagnosing the simple from the tubercular form of the inflammation. Differential diagnosis is often difficult, and sometimes impossible; but it matters little practically whether the form of the disease is ascertained."

It is noticeable in this section that there is no chapter on epilepsy in the book.

The ætiology of chorea is discussed at length. In summing up the author writes, "It is obviously better in the present state of uncertainty regarding the exact relation of rheumatism and valvular disease to chorea to postpone the acceptance of any theory till the minute anatomy of chorea has been as fully investigated as has its clinical history." In the treatment of this disease preference is given to the arsenical treatment of Romberg, or the cod-liver oil and hypophosphite treatment of Radcliffe, in some cases combining the two modes of treatment, and in some alternating them.

As there is still a difference of opinion amongst the highest authorities on the subject of the scarification of the gums, we venture to quote in full the author's views. "The gum-lancet," he writes, "is now much less frequently employed than formerly. It is used more by the ignorant practitioner, who is deficient in the ability to diagnosticate obscure diseases, than by one of intelligence, who can discern more clearly the true pathological state. Its use is more frequent in some countries, as England, under the teaching of great names, than in others, as France, where the highest authorities, as Rilliet and Barthez, discountenance it.

"It is well to bear in mind, as aiding in the elucidation of this subject, the remark made by Trousseau, that the tooth is not released by lancing the gum over the advancing crown. The gum is not rendered tense by pressure of the teeth, as many seem to think, for, if so, the incision would not remain linear, and the edges of the wound would not unite, as they ordinarily do, by first intention within a day or two. This speedy healing of the incision, unless the tooth is on the point of protruding, is an important fact, for it shows that the effect of the scarification can last only one or two days. The early repair of the dental follicle is probably conservative so far as the development of the tooth is concerned. It may help us to understand how active, how powerful the process of absorption is, if we reflect that the roots of the deciduous teeth are more or less absorbed by the advancing set, without much pain or suffering from the pressure. If the calcareous particles of the teeth are so readily absorbed, what is the foundation for the belief that the fleshy substance of the gum is absorbed with such difficulty? Too much importance has evidently been attached to the supposed tension and resistance of the gum in the process of dentition.

"Follicles in the period of development are specially liable to inflammation. We see this in the follicular stomatitis and enteritis so common when the buccal and intestinal follicles are in the state of most rapid growth. Does not this law in reference to the follicles hold true of those by which the teeth are formed, so that the period of their enlargement and greatest activity, which corresponds with the growth and protrusion of the teeth, is also the period when they are most liable to congestion and inflammation? This fact affords a better explanation of the frequency of the so-called laborious or difficult dentition than that it is due to the resistance which dental evolution encounters from the gums. If there are no symptoms except such as occur directly from the swelling and congestion of the gum, the lancet should seldom be used. The pathological state of the gum which would without doubt require its use is an abscess over the tooth. As to symptoms which are general or referable to other organs, as fever and diarrhoea, the lancet should not be used if the symptoms can be controlled by other safe measures. All coöperating causes should be first removed, when in a large proportion of cases the patient will experience such relief that scarification can be deferred.

"If the state of the infant is one of immediate danger, as in convulsions, and it is not quickly relieved by the ordinary remedies, scarification of the gums may not only be proper but urgently required. For in such cases all measures, provided they are safe and simple, which can possibly give relief should be employed without delay. But I can recall to mind only two acci-

dents of dentition which would be likely to be benefited by scarification, namely, suppurative inflammation in the dental follicle and convulsions. But since the bromide of potassium has come into use as a nervous sedative, and as an efficient remedy for chronic convulsions, scarification of the gums is much less frequently required, for even severe eclampsia commonly yields to this medicine if the condition of the bowels is attended to. Cutting of the gums is now abandoned as a means of relief in infantile paralysis, for this malady is known to be due to other causes than dentition."

Softening of the stomach (gastro-malacia) is regarded by the author as being frequently a pathological process taking place during life, a result of deficient alimentation or of inflammation. It is unnecessary to say that at the present day such views are regarded by most authorities as untenable, notwithstanding the distinguished names of Cruveilhier, Billard, and Rokitansky are cited in support of them.

The chapter on intestinal inflammation in infancy is one of the longest in the book, and the subject receives the thorough consideration which its great frequency and importance demands. "It is unfortunate," he remarks, "for a correct understanding of its prevalence and mortality in large cities that this disease is very generally in the summer months, when obstinate and especially when fatal, called cholera infantum, from which in its symptoms and nature it is very different. The one thousand five hundred fatal cases of so-called cholera infantum reported every summer in New York are, with now and then an exception, cases of this disease, generally protracted. In like manner the excess of reported cases of infantile marasmus in the second half of the year over those reported in the first half should be added to the statistics of intestinal inflammation."

The chapter upon intussusception has been carefully made up, based upon the records of fifty-two cases.

All the author has to say upon diseases of the circulatory system is included in one chapter upon cyanosis. All cases on record have been collected, and the chapter forms quite a lengthy treatise on the subject, embracing naturally the considerations of the congenital malformations of the heart.

In the transposing of prescriptions from the metrical system to that in use in this country two errors are noticed which require correction, as the doses given are larger than are intended, in one case being twice the prescribed quantity. On page 653, in giving the dose of *santonine*, 2.30 grains has been given as the equivalent of ten centimetres. On the next line, 1.15 grains as the equivalent of five centimetres is of course equally wrong. Again, in the chapter on syphilis, we read as the dose of Van Swieten's solution of bichloride of mercury, "Dose, one or at most two grammes (twenty-three to forty-six grains) in milk daily." It should of course read fifteen to thirty minims.

A description of this work would be incomplete without alluding to the numerous records of post-mortem examinations, and of cases that are abundantly made use of where needed for purposes of description and illustration.

PROCEEDINGS OF THE NORFOLK DISTRICT MEDICAL SOCIETY.

A. H. NICHOLS, M. D., SECRETARY.

THE quarterly meeting of the society was held at the Willard House, Hyde Park, January 11, 1876, the president, DR. S. E. STONE, in the chair. Present, forty-two members.

Ulcerations of the Os Uteri. — DR. CLIFTON E. WING read a paper upon "So-Called Ulcerations of the Os Uteri," which appeared in the *JOURNAL* of March 16th.

DR. H. A. MARTIN said that the paper touched upon several points of interest to the general practitioner. There could be no question but that the ordinary treatment of this class of affections resulted, so far as the patients were concerned, in infinitely more harm than good. He was able to recall the first paper upon this subject that had ever appeared in this country, written by Dr. Charles Meigs, of Philadelphia, a physician of great ability. It was given out in this paper that ulcerations of the os could be readily cured by a few touches with the solid nitrate of silver, and this fallacious notion had been very generally adopted by the profession. Dr. Martin expressed the opinion that cauterization of even the os and cervix uteri was by no means wholly unattended with danger. He had himself seen one case of endometritis, in which a single application of nitrate of mercury to the fundus had been immediately followed by severe, extensive, and nearly fatal pelvic cellulitis. In this instance, although the patient barely escaped with life, the result could not upon the whole be considered an unmitigated misfortune, for it proved the means of effectually relieving her of the conviction that heroic local treatment could alone meet the exigencies of her case. Since the super-vention of the pelvic cellulitis, this patient had carefully refrained from subjecting herself to any local interference, and had steadily improved. A variety of most distressing symptoms, formerly attributed to organic disease, have disappeared with the cessation of the fire and sword treatment, which was their real cause. Other cases were likewise cited, to illustrate that in this class of affections the benefit derived from violent local treatment was infinitely small, in comparison with the annoyance and suffering to which the patients are thereby subjected. More importance should be assigned to enlightened general treatment; while local applications, when resorted to, should be to a great degree restricted to the milder sedatives, astringents, and alteratives. He did not agree with the writer in considering these ulcerations about the os as akin to the artificial and trifling sores seen about the orifice of the nasal cavity in ill-tended children. A condition was often observed affecting the os, and extending more or less into the cervix, presenting such characteristics of ulceration as are commonly found in a granulating surface secreting pus, and yielding to precisely the same treatment as is efficacious in similar conditions upon the cutaneous surface.

DR. E. D. MILLER remarked that he had been much interested in the paper, and coincided, in the main, with the views advanced by the writer. It seemed to him that if the obscurity which now enveloped the pathology of

ulcerations of the os could be cleared up, there would then be much less diversity of opinion as regards the indications for treatment. He believed in the inflammatory character of the affection, and when this process was limited to the cervix, it did not of necessity entail any very decided objective symptoms. When, however, the body of the organ once became involved, severe reflex symptoms might be looked for. These local ulcerations and abrasions were rarely to be encountered, except in the case of married women. In this connection, he had but little faith in the usefulness of any of the mechanical supports for retaining in position a displaced uterus. If the local ulcerations and congestion were relieved, the version or flexure of the organ would not make much trouble. He had known some of the most severe uterine displacements to be unaccompanied by any ill effects whatsoever; nor did he think that even lacerations of the os and cervix would necessarily be followed by bad symptoms. He was inclined to question the advisability of any operation, with the view of bringing together the edges of the ruptured os. Rupture of the cervix attending childbirth would, as a rule, do well without surgical interference, provided the parts were in a healthy condition.

DR. MARTIN stated that he had observed rupture, inflammation, and so-called ulcerations, confined to the cervix, attended by very decided reflex symptoms; such, for instance, as pain in the back, in one or both groins (generally one, and that the left), and extending down the thighs; headache, nausea, etc.

DR. MILLER replied that this had not been his experience.

DR. WING observed that in cases of the rupture of the os and cervix taking place at time of confinement, he did not favor operative interference, except in rare instances, where the rent was extensive. He related the details of one case where the rupture was so long as to lead to an abortion. In such a case he would not hesitate to counsel an operation.

School Children and Infection. — DR. ARTHUR H. NICHOLS read a paper upon School-Children and Dangerous Communicable Diseases, which was published in the JOURNAL of March 23d.

DR. JOEL SEAVERN, in commenting upon this paper, remarked that although a long service upon the school committee enabled him to confirm the statement as to the absence of all rules designed to deal preventively with infectious diseases, he should, nevertheless, regard the attempt to enforce the proposed prophylactic regulations among the ordinary attendants of the schools as impracticable. Parents would manifest but little interest in the matter; for, while not unwilling to adopt certain precautions to prevent their own children from contracting diseases, they were not generally disposed to manifest much concern when the welfare of other and strange children was involved. When any disease breaks out within the house, parents are generally desirous to be relieved of the presence and care of those not actually sick, and hence hurry the well children back to school from infected houses at the earliest possible moment. The enforcement of the second rule, providing for the disinfection of children and clothing, was altogether impracticable. It should be, furthermore, considered that in a large proportion of the infectious diseases occurring among the lower classes, no professional attendant was

called in. Consequently, all evidence of the enforcement of the proposed rules would be limited to the statements of the parents, and would, therefore, be not fully trustworthy. Such regulations could be thoroughly enforced only by the aid of a qualified medical inspector, who should be required to make a personal inspection of the infected tenements and their occupants. Dr. Seaverns considered the enforcement of a limit of time for seclusion after infectious diseases as more practicable than ablutions and disinfection. He had known of epidemics so extensive and severe as to necessitate the closing of some of the schools.

DR. J. S. GREENE spoke of one danger to which school children were liable, namely, that arising from the concealment of contagious diseases in the early stage. There was also great danger of contagion so long as any dry skin, scurf, or crusts were attached to the body after scarlatina and small-pox. He had over and over again encountered children mingling with playmates, or riding in the horse-cars, with their skin presenting every condition necessary for the ready transmission of disease.

DR. E. P. GERRY thought the responsibility for the early return of children to school, after suffering from infectious diseases, rested, in many instances, with the teachers and the committee. Fault was found by the latter if the average attendance of the school was not large; hence, to raise this average, children were urged by the teacher to return as soon as possible after illness.

DR. H. A. MARTIN stated that he had had a large experience as regards the unwillingness of parents to have children vaccinated, and he had often been surprised to learn how many there were to whom vaccination had never been offered. He had once found twenty-three such individuals in a single tenement. He described, and strongly condemned, the means commonly employed in large cities for insuring the vaccination of the poorer classes. The provisions made for public vaccination were not acceptable to the classes for which they were intended, and for this reason, all efforts in this direction upon the part of the authorities were usually nugatory, except in times of panic. Dr. Martin maintained that time, and not disinfecting measures, would afford with this class the strongest protection from the danger of contagion. Hence, a certain period should intervene between convalescence from these diseases and the return of the pupil to school. The idea of carrying out the proposed disinfecting measures among the lower orders was simply preposterous. Such regulations, involving enforced baths and disinfection, could be enforced among this class only by a large and thoroughly organized band of lavators, disinfectors, and fumigators. He inquired whether "German measles" was included in the list of contagious diseases to be guarded against by the measures under consideration.

DR. A. H. NICHOLS replied that the disease, as observed in this vicinity, was so extremely trivial and free from danger, that it had not been considered at all.

DR. H. A. MARTIN agreed entirely in considering the disease of utter insignificance; he thought that a very doubtful service had been done by reviving, under the name "German measles," an utterly needless interest in a disease which was no more German than it was of any other race or nationality. The

diagnosis between this and any mild case of measles, and still more of scarlet fever, is not easy, and, indeed, to many inexperienced physicians practically impossible. The mildest case of either measles or scarlet fever is as likely to communicate by contagion the severest possible form of the malady as any other. Dr. Martin had known of at least two cases which were followed, after a few weeks, by nephritis, albuminuria, and other most serious symptoms. Dr. Martin's belief was that these were very slight cases of scarlet fever; the very ones which a discreet physician is most keenly watchful of, with a view to averting grave and fatal complications. Dr. Martin was, for these and similar reasons, of opinion that the same rules of isolation and prolonged absence, fumigation, lavation, ventilation, ablution, etc., as may be considered expedient in small-pox, scarlet fever, and measles, should also be applied to cases reported as German measles, believing, as he most surely did, that a very large proportion indeed of cases reported as such were cases of scarlatina benigna.

Dr. Martin alluded to the absurd division of cases of scarlet fever into scarlatina and scarlet fever; the first a very trivial and unimportant disease, liable to occur repeatedly, and very different from the latter, the most grave of children's diseases, occurring but once in a life-time, and indeed often for the very good and solemn reason that the first attack terminates life. As leading to needless exposure to contagion, and above all as inducing a neglect of the strict rules absolutely called for in the very mildest forms of this protean and dread disease, this fallacy should be attacked by all physicians worthy of the name. Thousands of children have died wretched, lingering deaths from dropsy and other sequela of neglected cases of mild scarlet fever; death occurring so long after the primary disease that parents, and even physicians, fail to ascribe them to their own ignorance, and consequent neglect of simple measures of diet, clothing, temperature, and above all daily bathing followed by proper friction of the surface. These daily baths should be kept up until the complete removal of the dead epidermis is insured. It should be understood that this process of desquamation is peculiarly slow and difficult after the milder cases of scarlet fever; hence artificial aid is here especially called for.

DR. GIFFORD stated that for the past fifteen years a rule had been enforced in Stoughton, prohibiting children from attending school from houses in which contagious diseases existed.

DR. TOWER remarked that in many towns children were allowed to attend school without any attempt being made to ascertain whether they had been vaccinated. He reminded members that the non-contagiousness of scarlet fever had been advocated about one year ago at one of the meetings of this society.

DR. J. STEDMAN related some interesting cases occurring in his own family, tending to show the extreme activity and transmissibility of the virus of scarlet fever.

Diaphragmatic Hernia. — DR. W. F. EMERY reported a case of the above lesion, and showed the specimen. An account of this case has appeared in a recent report of the proceedings of the Observation Society.

THE DISCOVERY OF ANÆSTHESIA.

IN the series of articles which are now appearing in the *American Journal of the Medical Sciences* under the heading, A Century of American Medicine, a most prominent place is naturally given to the great discovery of the century, and the narrative of this chapter of our history was most appropriately entrusted to an eye-witness of and participator in the events which gave it to the world. Dr. Henry J. Bigelow's article is a most exhaustive and able review of the controversy connected with this discovery, and has brought out, as might have been expected, a "critique" from a friend and fellow-townsmen of one of the disappointed aspirants for honors. Dr. H. P. Stearns, of Hartford, in a recent number of the *New York Medical Record*, espouses in a somewhat partisan spirit, we think, the claims of Wells to the title of discoverer. We do not propose to revive the discussion in these columns, but would call the attention of those of our readers who have read the articles in question to one or two important points to bear in mind. Of late years the citizens of Hartford have shown much enterprise in claiming for their fellow-townsmen and city the honors of this discovery. This was manifest at the meeting of the American Medical Association at Washington, when the resolutions indorsing Wells were passed. The faults of our national association were never more conspicuous than on this occasion. Circulars were distributed reciting Wells's claims as the discoverer. Testimony on the other side was deliberately suppressed, and the subsequent action of the association was but a fair sample of the many follies of that meeting. Such hasty and ill-considered action could hardly be expected to exercise much influence upon the opinion of the scientific world.

It is asserted that Wells's experiments with nitrous oxide were not abandoned, but that he and his friends in Hartford continued them. At the end of two years, however, the knowledge of this great discovery had not spread beyond the limits of a small country town. Morton, like Wells, was a stranger to Boston surgeons, yet a few weeks after Dr. John C. Warren performed the first operations under ether, at the Massachusetts General Hospital, anæsthesia was at the disposal of the civilized world.

On the monument erected over Morton's grave are the following inscriptions: "Before whom in all time surgery was agony. By whom pain in surgery was alleviated and annulled. Since whom science has controlled pain." Can it be said that this is not true of Morton? Who can say that it is true of Wells?

WHITE BLOOD CORPUSCLES IN DISEASE.

At a recent session of the Société Médicale des Hôpitaux, as reported in *L'Union Médicale* of March 9, 1876, M. Brouardel presented a thesis by one of his pupils, Dr. Henri Boune, on the variation in the number of the white blood corpuscles in certain diseases. In 1870, M. Brouardel called the attention of the society to some researches of his own on this subject, regarding variola. The methods employed were very defective, but since then they have been so much improved as to render the examinations easy and much less lia-

ble to error. In pursuing his investigations the reporter has ascertained from day to day the variations which presented themselves in the same patient in the number of white corpuscles in the blood, in the course of a given malady. The following results were obtained: In a patient from whom a cancerous breast was removed, the white corpuscles increased from one white to forty-eight red before the operation, to one to twenty-eight and one to twenty-three, three days after the excision. When suppuration was established, the proportion fell to one to sixty, ninety, and finally, as suppuration diminished, to one to four hundred.

In two patients having abscesses in the iliac fossa, the leucocytes were very abundant before the opening of the abscess, one to eighteen in one, and one to thirty-eight in the other. Immediately after the opening the number of white globules fell to one to one hundred and thirty-two in one, and to one to one hundred and thirty in the other. Similar conditions have been noticed in other forms of abscess, those of the neck, axilla, etc. Observations have conclusively shown that the formation of a purulent collection coincides with a considerable augmentation of the leucocytes of the blood, and that the discharge of the collection coincides with a rapid diminution of the white corpuscles. Analogous results have been noticed in patients affected with suppurative diseases. In variola, on the fifth day one white globule was found to four hundred and fifty red; on the sixth day one to forty-eight, on the seventh — that of the suppurative fever — one to one hundred and fifty, on the ninth one to two hundred and thirty-six; on the tenth none could be observed in the field of the microscope. In a case of suppurative pneumonia the white globules were increased on the ninth day, at the time of death, to one to forty red. A marked increase in the number of white corpuscles has been twice observed in cases of herpetic fever. In a case of typhoid fever where up to the seventh day of the disease the white corpuscles were very numerous, they fell from one in seventy to less than one in five hundred on the ninth day. Their number increased only when abscesses supervened. This observation shows that the number of white globules does not follow the variations of temperature.

The reporter thinks that the study of the formation of white corpuscles in acute diseases, and in those which are not attended with suppuration, is worthy of the attention of pathologists.

MEDICAL NOTES.

— In the name of M. Cloez, says *L'Union Médicale* of March 18, 1876, M. Chevreul has presented to the Académie des Sciences some specimens of a new oil. It is extracted from a Chinese plant and is as yet little known. The oily material is obtained by submitting the seeds of the plant to strong pressure. It contains, like other oils, a large proportion of glycerine. Its characteristic and very peculiar property is that it soon solidifies when exposed to light. This solidification cannot be attributed to the absorption of oxygen from the air, as takes place in the drying oils, because the phenomenon is produced also *in vacuo*; but it does not manifest itself in the same manner under

transparent glasses of different tints. In a receptacle of yellow glass the solidification does not take place, but it does, on the contrary, in a transparent violet vase. It may not be well, then, to choose flasks of the latter color for holding substances, like chlorine water, which are easily decomposed by the action of light. M. Chevreul suggests that it would be better to employ, as the photographers do, vessels of yellow glass.

— The experiments of Dr. Pouza, of Alexandria, in the use of colored glass in the treatment of the insane are narrated in *The British Medical Journal* of March 25, 1876. Dr. Pouza placed his patients in chambers colored red, blue, and violet. In the red room he placed a melancholic man, who had refused his food, but who in three hours was lively and hungry. In the blue chamber a violent lunatic was placed, who became quieter within an hour. The violet room furnished equally good results. Of the rays of the spectrum the violet possess the most intense electro-chemical rays, the red are the richest in calorific rays, while the blue, devoid of these properties, are the most useful in their quieting influence. It is to be hoped that further experiments may show that by the employment of the simple means referred to, the good results which Dr. Pouza has indicated may be obtained by others.

MAINE GENERAL HOSPITAL.

SURGICAL CLINIC.

Bronchocle. — Mrs. Susan J., aged fifty-eight, nativity and residence Portland, admitted July 21, 1875. History is that of bronchocele, which commenced about six years ago in the form of a "lump" about the size of a filbert, two inches below the lobe of the right ear. This gradually increased in size, working its way downward and forward, and involved the whole gland, presenting a firm, non-fluctuating tumor the size of two closed hands, most prominent on the right side. A harassing cough has existed for the last six months; there has been much difficulty in deglutition and respiration, and the voice has been much affected, all of which symptoms have rapidly increased during the last six weeks. She is a portly woman, has enjoyed fair health, but possesses that peculiar constitutional condition of the system associated with the disease. There is no trace of goitre in her family history.

At a consultation of the surgical staff it was decided to attempt its removal by Mackenzie's method.

July 23d. Dr. Weeks began the treatment by the injection of one drachm of alcohol, making the puncture in the most prominent portion on the right side, two inches from the median line.

July 26th. The injection produced headache and slight darting pains in the neck. Six ounces of albuminous fluid were drawn off with the aspirator, thus showing the nature of the tumor, and a drachm of alcohol with twenty drops of tincture of iodine injected.

July 29th. About two ounces of bloody fluid were drawn off, and a drachm of alcohol with thirty drops of tincture of iodine injected. Enlargement reduced to two thirds its former size.

August 4th. One ounce and a half of bloody fluid were drawn off, and a drachm of alcohol with thirty drops of tincture of iodine injected.

August 6th. Little more than an ounce of bloody fluid was drawn off, and nothing injected.

August 13th. One drachm and a half of bloody fluid were drawn off, and the same amount of compound solution of iodine injected.

August 17th. About a drachm of puriform fluid was drawn off, and nothing injected.

August 28th. An ounce of puriform fluid was drawn off, and nothing injected.

September 3d. Ether spray was used to avoid the pain caused by inserting the needle, and one ounce and a half of thick, puriform fluid were drawn. An incision was made to enlarge the opening, and a flaxseed poultice ordered to be applied.

September 6th. Tumor more pointing and cough more troublesome. A little bloody fluid was drawn off with canula and trocar.

September 8th. Commenced to discharge, relieving the cough and dyspnœa, both of which have been very annoying.

September 12th. Two ounces of thick, puriform fluid were drawn off, the discharge having ceased.

September 20th. The discharge continues.

On the 13th instant an erysipelatous inflammation began at the point of puncture and rapidly spread over the neck, chest, and back. Large and repeated doses of tincture of iron were given and appropriate washes applied.

September 24th. The inflammation has extended over the face and head; there is much tumefaction about the eyes and ears, so that the functions of both organs are suspended. The patient is unable to speak aloud, and lies in a pitiful condition.

September 27th. Erysipelatous inflammation subsiding. It has become evident that there are at least three sacs, and that the discharge does not come from the deep one. There are unusual symptoms of pressure on the larynx and trachea, and the aspirator needle being inserted into the neck about four inches, two ounces of nearly laudable pus were drawn off, with immediate relief to the dyspnœa and voice.

October 3d. There is quite a prominence in front, which seems to be caused by a sac that has burrowed from the one now discharging. The needle of the aspirator was introduced about on a level with the other puncture, near the median line, and from this and the deep sac two ounces of quite healthy pus were drawn off with much relief.

October 10th. One ounce and a half of purulent fluid were drawn from the sac near the median line. Constant discharge from the old opening.

October 14th. Suffering from pressure. The needle was inserted down into the deep sac, through the old opening, and two ounces of purulent fluid were drawn off, with the desired relief.

October 21st. Again suffering from pressure from the sac in the median line, which has been discharging since the last note. After introducing the needle into the new opening, one ounce and a half of purulent fluid were drawn

off, with much relief. Dr. Tewksbury, whose term of duty began with the present month, in considering the matter with Dr. Weeks, thought that if a seton could be put through each sac a constant discharge would be kept up, and the distressing symptoms of pressure avoided; but upon trial it was found that the point at which the sinuses would meet in the neck was so deep and at such an angle that the seton could not be introduced. Consequently it was abandoned, with a view of using tents to keep the openings capacious and to maintain a free discharge.

October 26th. One ounce and a half of purulent fluid were drawn off, with the usual relief.

October 31st. About the usual amount of fluid was drawn off, and a sea-tangle tent inserted into each of the two openings.

November 1st. She had a severe chill last evening, and sank into a condition of collapse. After persistent use of external and internal stimulants she rallied. Upon removing the tents to-day, double the usual quantity of pus was drawn off. A small sea-tangle tent was put in the old opening.

November 2d. Last evening there was a more marked state of collapse. The pulse was feeble at 150 per minute, the surface became cold and livid, and the patient's friends were informed that she would probably die. Stimulants were used freely; she finally rallied, and passed quite a comfortable night. There is the old opening four inches, at which point it strikes, probably, the spinal column. A profuse discharge from both openings, and a probe can readily be passed down umn. As the abscess has had a tendency to point backward, it is feared that it may go on and destroy life.

November 13th. Two more sea-tangle tents have been used, but they produced such alarming symptoms that their use has been abandoned. There is a pretty constant discharge; whenever it stops a day or so, cough and difficult breathing become annoying, both of which are relieved by tapping with the trocar and canula. Quite a large piece of pyogenic membrane has come away.

November 27th. Discharge lessening, but for the last ten days it has had a very offensive odor, like decomposing flesh. Opening in median line closing up, and the cavity to which it leads becoming obliterated. Patient sits up, and walks about a little.

December 11th. Improving; discharge small; odor disappeared. Iodine applied on a cotton-tipped probe daily to the cavity on the right side, the depth of which is gradually lessening. The other opening entirely closed.

December 18th. She has steadily improved. The enlargement, now only on the right side, varies; some days, after free discharge, there is none. The cavity is now less than two inches in depth; there is no cough, no difficulty in breathing or swallowing, and she left the hospital to-day. There have been many annoying complications during the treatment. She has complained bitterly of incontinence of urine; has frequently been disturbed every half-hour during the night; has had gastro-intestinal disturbances; constipation alternating with diarrhoea, headache, etc.

January 21, 1876. For the first two weeks after leaving the hospital, iodine was applied three times a week. The last application was made on the 8th

instant; the enlargement has all disappeared, the cavity is obliterated, the opening closed; there is no cough, difficulty in breathing, or swallowing, and the patient's general health so much improved that she frequently walks a mile.

E. E. HOLT, M. D.

LETTER FROM BERLIN.

MESSRS. EDITORS, — It is noticeable how much more one is questioned in regard to the medical instruction of Boston than to that of New York or Philadelphia, by men connected with the University of Berlin. The inquiry is accompanied by an expression of congratulation upon the new departure in the Medical Department of Harvard, and at the same time suggests a doubt as to its ultimate success in the practical American medical profession. Germans, of all foreigners, have such strange notions of Americans, as well in pursuits in the medical sciences as in matters of commercial life. As to the latter, we are swindlers, and are absolutely unable to "turn an honest penny;" in our systems of medical education we teach what we steal from Europe, principally from Germany, of course, after adroitly weeding out everything that is purely theoretical or debatable, or that involves logical study, as, for instance, histology and those branches of physics so closely allied to medicine. As to commercial affairs, it is the almighty dollar; get it who can, with its value below par, and spend it at one hundred and ten per cent. In medical education, we must have a diploma as doctor after a few months' hearing of facts from the lecture-desk, without any preliminary or post-graduate study, and at the highest price. Within a fortnight, in the *Vossische Zeitung*, the largest secular journal of Berlin, whose office is to reach the greatest reading public without representing any extreme of liberalism, radicalism, or royalism, either in church or state, there has appeared an article decrying some popular statements made in regard to the superficial examinations and the easy obtaining of diplomas from the medical departments of Erlangen and Leipzig, and which arrayed these schools in comparison with our own. Another article in the same journal, of later date, from the pen of a well-known Berlin physician, calls upon the government to take the field against dabbling in medicine by quacks, *medicinal pfuscherei*, which exists to a large extent in the states of Bavaria, Saxony, and Prussia, before it reaches its most dangerous feature, namely, the so-called American doctor. No school at home is asked to wear the shoe unless it fits. The Germans, I say, have such strange notions of us as medical instructors; for with their conceptions of our falsity in education, we are to them the most adroit surgeons, contribute the most by invention, and erect the best hospitals of any people. I do not think they respect our scholarship, but they admire the talents of our genius, and the genius of our talent. The basis of any new American theory in medicine is questionable to the philosophic German mind; while a new operation, the surgical treatment of a disease, or the invention of a new surgical instrument, commands their ready attention. It is not necessary to more than call attention to the fallacy of such exaggeration. On the other hand, it is agreeable to hear such a man as Donders, of Utrecht, in Holland, saying that one must be energetic to keep up with the advances made in scientific researches in medicine, especially in

ophthalmic surgery, on the American side of the water; or Langenbeck, the ripest surgeon of Europe, testifying to the advantages of this or that operation simplified by American skill; or to see Helmholtz, with his natural modesty, quietly admiring Loring's latest ophthalmoscope, and its neat setting by Hunter, of New York.

There is here a manifest interest taken in the future of the graded or the university system of medical education in America. Comparisons made between the system here and at home will apply to any German university equally well. In all is there the same general plan of government under the dean or dekan. The professors are bought and sold at the highest prices between the universities. Instruction is by lectures, public and private, not by recitations, a method which succeeds so admirably with us. No students are quizzed publicly, except those who register their names as quiz-candidates, and who pay extra for the privilege. Quizzing takes place only in clinics, and each student, as his name is called, enters the lecture-space, is personally addressed by the professor, and obtains a full view of the patient. His temporary relations with the professor are those of an attending to a consulting physician. The whole body of students never come together, as the system for the undergraduate is prescribed, and that for the post-graduate is elective. Popular men — and I mean by this men whose names are well known, though they may be poor lecturers — command naturally the largest audiences, as Virchow, Du Bois-Reymond, and Langenbeck. In giving didactic instruction the teachers, as a rule, sit and talk to the students. There is no attempt at rhetorical display, while there is a positive lack of illustration. The blackboard is used in every lecture-room, but with the usual defects, in contrast with charts, which obtain at the hands of every one not an artist. In the departments of histology, ophthalmology, and otology are these defects most noticeable. Not in Berlin alone, but, as I learn, in all German universities, is the method the same. Americans testify to a like simplicity in English and Scotch universities. As a partial substitute, small and usually very finely executed hand-plates are passed through a class, a method which presents the obvious inconvenience of a majority of the students studying the plate long after its description by the instructor.

The students are orderly, respectful, and patient. Accustomed at the beginning of the semester to a delay of three weeks, they submit without a murmur to the convenience of the faculty. It is to me a matter of profound surprise how the Germans, who justly deserve the reputation of successful achievements in medicine, find time to do anything. They begin their day as they begin their semester, late. They are always fifteen to twenty minutes behind their hour, and the semester closes three weeks short of the announced time. Indeed, this winter semester, which should continue in full operation from October 16, 1875, to April 1, 1876, will have lost eight or nine weeks by delay at the opening, the long holidays, and the antedating of the finish. American students naturally feel disappointed, and among themselves deplore the dilatoriness so apparent in the executive department of the university. German students are so accustomed, by their own personal habits and their expectations of the professors, to the existing arrangement that they rarely appear on the ground in full force until the middle of November, and they retire

early in March; they good-naturedly laugh at our faith in the statements of the university prospectus, and at our claims to get our money's worth. I may illustrate the condition of things by alluding to Virchow, the busiest man in Berlin, in popular estimation, but among the most delinquent in the estimation of his *confrères*. He is announced to hold a demonstrative course of pathological anatomy and microscopy in connection with instruction in pathological sections, Mondays, Wednesdays, and Saturdays, from eight to ten A. M.; also a practical course of pathological histology, Tuesdays, Thursdays, and Fridays, from eight to ten A. M. He began November 8th, and, as the days were dark at eight o'clock in the morning, actually opened at 8.45 or nine. Through November, he personally met his large class daily from nine or ten, as it happened, for one and a half or two or two and a half hours. When you once get Virchow before a class, he stays until he finishes. The Pathologisches Institut is a building devoted to his work alone; it is set off in the Charité grounds by itself, and is a splendid tribute to Virchow's work in this department. But there are obstacles to the study of pathological anatomy and histology, even under such a master as Virchow. One can do nothing else that morning; what with waiting for his appearance, and listening to him two hours, the morning is entirely gone.

In December the days seemed to begin later and number less: Virchow met his class three and two times a week; since January twice a week has been his average. Fortunately, however, he has capable and willing assistants, who reflect him, the oldest of whom have been in his service for years. No one complains of getting too little of Virchow; it is the irregularity, the want of system, in his department, that is so palpable. I may safely say it would hardly be allowed in America; through the pressure of the board of government of our universities; while in Paris the students would cry out against it. Such are some of the disadvantages of studying in Berlin. They will be easily overcome even by ambitious, diligent Americans — and I rejoice to know that those here this winter command that compliment — when one makes up his mind to stay one or two semesters here, working under the conviction that these men must have time to develop themselves. They are not to be hurried, and will interest themselves in a student so soon as they find him specially interested in their department. Vienna receives the largest number of Americans, on account of its short-course system, none of the courses exceeding six weeks. There one can push through a batch of special courses in any one or more departments simultaneously, by devoting as many hours daily as he will, and then return, spending the time devoted to an ordinary pleasure trip to Europe. The arrangement has its merits and its demerits: merits, as to the saving of time and money; demerits, as to inordinate haste, and the loss of the best work of the day, namely, private study.

In brief, it is the concurrent testimony that the University of Berlin furnishes through Professor Virchow the most exhaustive and accurate pathological study in the world; aside from the two courses mentioned, he gives instruction in the pathological laboratory to students making special investigations in distinct departments of microscopy, each student having a separate desk, with a microscope, dissecting instruments, chemicals, water, and gas. In

surgery. Baron von Langenbeck's daily clinique has an enviable reputation, both in the amount and character of material, and in the manner of its handling. Langenbeck is sixty-five years old, and came from Kiel to Berlin in 1850. He came to take the chair which he continues to hold. His clinique in the old theatre in Ziegelstrasse is the most popular surgical clinique of the university. Bardeleben is a better, because a more painstaking instructor, whom the students accompany into the wards. Langenbeck's eminent points as a surgeon are his accurate diagnosis, his boldness as an operator, and his brilliant results. There is nothing brilliant about his operating; his movements are slow, and he says very little, but he operates with a reliance on long-established surgical principles, and with the confident determination of success, characteristic of a master. Three times a week he has an hour in *akiurgery*, in contradistinction from *chirurgery*.

In experimental acoustics and optics, Helmholtz has no equal. It is well known that he brought the ophthalmoscope before the scientific world in 1851, and that to him *par excellence* is due the present knowledge of the anatomy of the internal ear. He does not belong strictly to the medical department, and in fact is catalogued in the department of the natural sciences. To his efforts a few years ago must, however, be attributed the clew to the more recent developments in the scientific investigations of ophthalmology and otology. Helmholtz was in Heidelberg at the time of his work in these directions.

In many of the private offices of the professors and *privat docents* of this university hang four faces: Virchow, Langenbeck, Helmholtz, and Graefe. The last no longer lives, but his chair and, I may add, his spirit fell to Schweigger, who for many years was his assistant. Though Graefe devised many operations which outlive him, Schweigger performs them better. He is forty-two years of age, but already takes prominent rank among ophthalmic investigators. Mauthner, of Innsbruck, alludes to his concise handbook on the use of the ophthalmoscope as a complete guide for the student in ophthalmoscopy, paying an equal tribute to him and to the renowned Zander. In addition, Schweigger has a text-book on *augenheilkunde*, which indicates his quick intuition and logical criticism.

Such are some of the features of the medical department of this university. In a future letter I will give you a sketch of the course of study, with some comments as to its manner of working; perhaps, while you are enthusiasts in Boston on the subject of medical education, and as you have lately noticed Billroth's last summer's book on the subject, it may be a timely article.

The public journals make the following announcement: The fifth congress of the German Surgical Society will meet in Berlin from April 19th to the 22d, a postponement from April 5th. A number of articles on the Lister antiseptic system is to be presented, which system Langenbeck thoroughly adopts in theory and practice.

The following bulletin appeared in the vestibule of the university at the opening of the semester, tacked within a broad, deep, black-painted case, whose front was spanned by a strong wire guard; I send it as a curiosity for your medical student readers:—

"Dr. Bardeleben prof. p. o.—Commilitonibus ornatissimus p. hoc sem. hibernum hasce offert scholas:

1. Publice: de *vulneribus*, die Saturn. h. xi.

2. Privatum:

a. de *chirurgiâ*, diebus Lunæ, Mart., Mercur., Fovis, Veneris, h. xi.

b. Exercitationes clinic. chirurgic. in Regio Caritatis nosocomio h. ix. usque ad hor. xi.

Auditorium est in alla Regio Caritat. noscomii parte, quæ 'Sommerlazarat' vocatur. Initium facturus sum die i M. November. Nomina daturis vacabo in noscomio illo hor. xi et xii, præterea in ædibus meis, 'Matthai Kirche Strasse,' 29, hor. iii. D. BEROLINI d. xvi M. Octobr., MDCCCLXXV."

Yours truly

MED.

BERLIN, March 6, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING APRIL 8, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week
New York	1,060,000	578	28
Philadelphia	800,000		
Brooklyn	500,000		
Boston	342,000	154	23
Providence	100,700	42	22
Worcester	50,000	18	19
Lowell	50,000	27	28
Cambridge	48,000	18	19
Fall River	45,000	20	23
Lawrence	35,000		
Lynn	33,000	12	19
Springfield	31,000	10	17
Salem	26,000	11	22

Normal Death-Rate, 17 per 1000.

WE would call attention to an advertisement which has been placed in the JOURNAL announcing a vacancy in the staff of assistants of the Eye and Ear Infirmary. There are three positions: that of aural externe at a salary of \$100 per annum, of ophthalmic externe at \$100 per annum, and of ophthalmic interne at \$200 per annum, with room in the infirmary. At the expiration of one year the ophthalmic externe is entitled to the position of interne if he has fulfilled his duties satisfactorily. The term of service begins July 1st. Two positions, therefore, are each year open to third-year students and graduates on competitive examination.

BOOKS AND PAMPHLETS RECEIVED. — Atlas of Skin Diseases. By Tilbury Fox, M. D., F. R. C. P. Parts IV. and V. Philadelphia: Lindsay and Blakiston. 1876. (From A. Williams & Co.)

Normal Urethra and its Constrictions in Relation to Strictures of Large Calibre. By Robert F. Weir, M. D. (Reprinted from the New York Medical Journal, April, 1876.)

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DOES THE INHALATION OF ETHER PROMOTE POST- PARTUM HÆMORRHAGE?¹

BY FRANCIS MINOT, M. D.,

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THERE is a difference of opinion among physicians engaged in obstetrical practice as to how far hæmorrhage after delivery is caused or promoted by the inhalation of ether or chloroform during labor. Many are averse to employing anæsthetics in parturition, because, among other unfavorable results, they have sometimes known them to be followed by hæmorrhage, or because they think they might be so followed, on account of their supposed effect in retarding uterine contraction. The question is an important one, for, on the one hand, the use of ether is an immense comfort to a woman in labor; and, on the other, hæmorrhage is justly considered to be one of the most dangerous complications of childbirth.

The only way in which this interesting question could be satisfactorily answered would be by comparing a large number of cases in which ether had been given with an equal number in which it had not been given. In such a comparison, however, it would be necessary that the recorded cases should be as similar as possible. Besides the inhalation of ether there are several circumstances which might have an influence in causing hæmorrhage or in preventing it, among which may be mentioned a family history of hæmorrhage, as showing a predisposition to flooding; a constitutional or acquired tendency to hæmorrhage, as shown, for instance, by menorrhagia; the previous health of the patient, whether vigorous or feeble; the number of her previous labors; the class of society to which she belonged; the character of the labor itself, whether difficult, lingering, powerless, complicated, etc.; the kind of anæsthetic employed, the amount inhaled, and the management of the placenta. All these considerations, and probably others, ought to be taken into account in making a perfectly trustworthy comparison, but the difficulty of doing this is so great that there seems to be no prospect at present of our obtaining a sufficient number of such observations as are necessary for a satisfactory solution of the question.

¹ Read before the Obstetrical Society of Boston.

Approximate results, however, might be obtained without these details, provided the number of cases to be compared were sufficiently large. If, for example, by comparing one thousand consecutive cases, in a lying-in hospital, in which ether had been given, with a similar number in which it had not been given, it should be found that there was a decided preponderance in favor of hæmorrhage in the first series, then the evidence would be strong that the ether was the cause of the hæmorrhage, or at least favored it. But until we have such means of comparing a large number of trustworthy observations, the question of the danger of giving ether in labor, so far as hæmorrhage goes, must, I think, still be considered as undecided. Meanwhile, however, it is possible that in the absence of such statistics an examination of even a limited number of cases in which ether was given during labor may afford some indication at least with regard to the influence, if any, which the anæsthetic had in the production of this accident. In the hope of contributing something towards the solution of this question, I have tabulated the results of one hundred and fifty-one cases of labor occurring in my own practice, in which ether was given during labor, the fact being recorded in nearly every instance. In a very few cases in which the record does not state whether the patient was etherized, I have relied on my recollection of the fact. In one instance in which there was post-partum hæmorrhage, the notes do not state that ether was used, nor have I any recollection of the fact; but I am confident that if it had not been used it would have been so recorded, and have therefore included the case in my collection.

At the outset of the investigation it is necessary to consider the question, What constitutes post-partum hæmorrhage? It is obvious that one woman will endure with apparent impunity a loss of blood which would cause serious and even alarming effects in another; and also that practitioners may differ in their estimate of the amount of danger in any one case. I have divided the cases in which noteworthy hæmorrhage occurred into two classes, the first including those in which the immediate effects were alarming or serious; the second comprising those in which there were no alarming symptoms, though sometimes such as caused anxiety. The symptoms presented by the first class of patients were those ordinarily noticed after profuse hæmorrhage: syncope, as shown by extreme pallor, more or less complete loss of consciousness, great rapidity and feebleness of the pulse (in some instances it could not be felt at the wrist for a considerable length of time), sighing, restlessness, etc. In the second category are included cases in which the amount lost was larger than usual, but in which the pulse was not affected, though the patient may have become somewhat pale. Where neither syncope, pallor, nor acceleration of the pulse occurred, I have not considered the hæmorrhage as of sufficient importance to be

specially noted, unless the amount was a good deal above that usually observed.

I will state that in every case of flooding recorded in the present paper, the patient recovered. The only case of fatal post-partum hæmorrhage which has occurred in my practice (exclusive of cases seen in consultation), was that of a woman who, to the best of my recollection and belief, took no anæsthetic; but as the record made at the time (many years ago) is silent on this point, I have excluded the case from consideration.

Of the whole number of cases (one hundred and fifty-one), there were twenty-five in which noteworthy hæmorrhage occurred after delivery; in twelve of these, or nearly eight per cent., it was so profuse as to give rise to serious symptoms; in thirteen others it was not alarming, though in some of them sufficient to cause anxiety.

I will first give the particulars of the twelve cases in which there was serious flooding.

CASE I. Mrs. D., June 17, 1865. She had already borne two children, the youngest ten years old (particulars as to hæmorrhage in those labors not known). There was "flooding to large amount," with faintness, etc., from which the patient rallied, and did well. The labor was otherwise quite natural, and I know of no immediate cause for the hæmorrhage unless it were the ether. This is the case in which ether was probably given, though there is no record of the fact, nor have I any recollection of it.

CASE II. Mrs. R., October 17, 1868. Profuse hæmorrhage, followed by alarming prostration, from which the patient recovered, and did well. The labor was otherwise normal, and I know of no immediate cause for the bleeding unless it were the ether. I had attended the patient in two previous confinements, and in neither labor was there hæmorrhage, *although she was etherized each time.*

CASE III. The same patient was again confined, February 21, 1876. This was her sixth labor, which, as was usual with Mrs. R., was rapid. Ether was given during half an hour before delivery, but the patient was insensible only during the last few pains. Ergot was given immediately after the expulsion of the placenta, but in about fifteen minutes the pulse rose, and the patient became pale. Very little blood flowed externally, but the womb was found to be full of clots, which had to be removed by the hand twice before there was firm contraction. For an hour the pulse could scarcely be felt at the wrist. The patient rallied under stimulants, and did well. She had undergone much anxiety and fatigue during several months on account of the illness of one of her children, who died a few days after her confinement. This circumstance may have contributed to the occurrence of the hæmorrhage, but no such cause existed on the previous occasion.

CASE IV. Mrs. S., April 24, 1870. Primipara. "Anterior fontanel felt nearly opposite the left cotyloid cavity." The patient began to take ether at noon. At five P. M., there having been no advance for several hours, the forceps were applied, and the child extracted with much effort. Soon after delivery the mother had profuse hæmorrhage, which ceased after the clots were removed from the womb. The labor lasted more than twenty-four hours, the pains being very inefficient, and this circumstance would seem to have had as much agency in causing hæmorrhage as did the ether. This patient was confined a second time, April 18, 1874. The labor was rapid and easy, and *she took no ether.* "A good deal of blood came with the placenta, but none afterwards." The history of this patient might be considered as proving that the use of ether favored a predisposition to hæmorrhage, inasmuch as when she took it she flowed profusely, and when she did not take it she flowed moderately. But it is obvious that the two cases cannot be compared. After a tedious labor, by which the patient was greatly exhausted, hæmorrhage would be likely to follow, whether ether were given or not; and the second labor, being natural and rapid, would not probably have been complicated with hæmorrhage, even had ether been given.

CASE V. Mrs. W., February 21, 1870. I had attended this patient in four previous labors, in all of which (as well as in one other) she was etherized. In one instance there was moderate hæmorrhage, but in none of the others. On the present occasion there was alarming hæmorrhage, followed by syncope and threatened collapse, but the patient rallied and did well. Here there was no apparent cause for the hæmorrhage (unless ether), except a constitutional tendency; she had always suffered from menorrhagia, though she was otherwise a remarkably healthy woman.

CASE VI. Mrs. F., November 2, 1871. Primipara. This patient was delicate, but there was no obvious cause for the hæmorrhage, unless it were the ether. "There was profuse hæmorrhage after the placenta was expelled, which was repeated in twenty minutes. I introduced the hand into the uterus and removed a large amount of clots, which were expelled with great force, and no more bleeding occurred. For more than an hour the patient's condition was alarming, but after that she was comfortable."

CASE VII. Mrs. G., December 20, 1872. This patient had had three children previously, without hæmorrhage. I had attended her in her last two confinements, in each of which I gave her ether. On the present occasion the pains began early in the morning, were slight throughout the day, became strong at ten P. M., though infrequent, and delivery occurred at half past eleven P. M. "She was soundly etherized at delivery, which was followed by profuse hæmorrhage and alarming

stration." Under appropriate treatment the hæmorrhage ceased, but the patient remained in a dangerous condition for several hours. She did well. If the ether caused the hæmorrhage in this instance, why did it not do so on the two previous occasions?

CASE VIII. Mrs. P., June 30, 1872. Primipara. This was a case of lingering labor, with inefficient pains, though the patient was very robust and healthy. After twenty-four hours' labor the forceps were applied, and delivery easily effected, the patient being soundly etherized. The weather was excessively hot. Profuse hæmorrhage followed the expulsion of the placenta, causing alarming prostration. The bleeding continued at intervals for about three hours. The patient rallied and did well. Here the inefficient character of the pains and the length of the labor would seem to be sufficient to account for the hæmorrhage. At any rate, they would have been accepted as good and sufficient causes before the discovery of anæsthesia.

CASE IX. The same patient was again confined, January 5, 1875. The waters broke at four A. M. This was followed by pains, which increased till half past nine A. M., when they slackened. No advance having been made for an hour, and the head being quite low, the forceps were applied, and the patient was easily delivered. Ether to a moderate amount was given till the instruments were used, when the patient was made completely insensible. "Soon after the expulsion of the placenta there was a great gush of blood (at least a quart), by which the patient was prostrated, and the pulse could hardly be felt at the wrist. No more blood followed, and the patient did remarkably well." In this labor, as in the last, the hæmorrhage might be attributed to a constitutional predisposition, to inefficient pains, or to the use of ether. The patient was, however, as soundly etherized the second time as she was the first, while the hæmorrhage was much less; but the labor was much easier and more rapid. It seems right, therefore, to attribute as much agency to the character of the labor as to the use of ether.

CASE X. Mrs. L., May 29, 1873. Primipara. Here the pains were inefficient and the labor tedious, and it was terminated by the forceps. There was alarming hæmorrhage, from which the patient rallied, and did well. The character of the labor seems entitled to as much credit as the ether in causing the hæmorrhage, since when the same patient was again confined, June 2, 1875, she took ether "to unconsciousness" and had no hæmorrhage. The labor was rapid, and the pains were strong.

CASE XI. Mrs. R., April 12, 1874. Multipara. I had attended the patient in two previous labors, and etherized her; they were both rapid. The first time (the patient's second labor) there was no hæmorrhage. The next time there was some hæmorrhage, but not serious. In the present instance the quantity of ether inhaled was not

large. The placenta followed the child without any traction. "1, fuse hæmorrhage followed, the womb dilating and contracting repeatedly. No pulse could be felt at the wrist for nearly an hour, and the patient was much prostrated. Compression of the abdominal aorta seemed to be of service. The patient rallied under stimulants and laudanum." Here the ether seemed to have but little influence in causing the hæmorrhage, as the amount used was small.

CASE XII. Mrs. W., March 12, 1876. I had attended the patient in her previous (first) confinement. It was a case of breech presentation. She was etherized, and had no hæmorrhage. In the present instance the presentation was normal, but an arrest of an hour having occurred, while the head was on the perinæum, the forceps were applied, and the patient was easily delivered, though considerable delay occurred in extracting the shoulders, on account of the size of the child, which weighed about twelve pounds. Along with the placenta there was expelled a large quantity of blood (perhaps two quarts), and the patient became quite faint. She was revived with brandy, gruel, etc., and did well, the pulse not rising above ninety.

Besides the above twelve cases of profuse or serious hæmorrhage, there were thirteen others in which the amount of flowing was noteworthy, although not attended with serious symptoms, as follows:—

CASE I. Mrs. C., February 23, 1867. There was "considerable flowing" after delivery; labor otherwise normal. I attended this patient in one previous labor, and in one subsequent one. In the first instance (she being primipara) there was a brisk uterine hæmorrhage a week before delivery, none after it. (There was no evidence of placenta prævia, other than the hæmorrhage.) In the last labor there was no hæmorrhage, either before or after delivery. If the ether caused the flowing after the second labor, why did it have no such effect in the first and third confinements?

CASE II. Mrs. C., December 30, 1869. Multipara. "Considerable hæmorrhage, with some prostration." The patient was a delicate woman. She inhaled ether "during the last pains" only. The state of the patient's health, and not the small amount of ether used, was obviously the cause of the flowing.

CASE III. Mrs. R., January 14, 1872. "Some hæmorrhage, but not serious." She was the same patient as in Case XI. of the previous series.

CASE IV. Mrs. D., July 2, 1873. "Rather free hæmorrhage." The labor was otherwise normal. I attended the same patient once previously and once subsequently, and at neither time was there any hæmorrhage, though she was fully etherized on both occasions.

CASE V. Mrs. S., March 20, 1874. (Sister of the preceding patient.) I had attended her once previously (her second labor), when

she was etherized, but had no hæmorrhage. On the present occasion she inhaled ether, but "not to complete insensibility." "Considerable blood with the placenta, none afterwards; rather more exhausted immediately afterwards than usual. She did well." The small amount of ether inhaled could hardly have caused the flowing.

CASE VI. Mrs. S., April 16, 1874. One child, born nine years ago. Labor rapid. "Some hæmorrhage, but not alarming."

CASE VII. Mrs. P., November 1, 1874. Primipara. Forceps used on account of delay, the head resting on the perinæum. "Hæmorrhage rather more free than usual, but not profuse." She was "soundly etherized."

CASE VIII. Mrs. W., November 6, 1874. Primipara. Tedious labor, with normal presentation. On account of symptoms of exhaustion, in consultation with Dr. Abbot, the forceps were applied within the os, and delivery was effected with considerable effort. A good deal of hæmorrhage followed, with pallor, but the patient soon rallied. Here the character of the labor and not the ether was evidently the cause of the flowing.

CASE IX. Mrs. F., November 20, 1874. Second labor. Rather more hæmorrhage than usual through the day, the following night, and the next day, with clots, but without any effect on the pulse or color.

CASE X. Mrs. R., November 21, 1874. Second labor. After the first, in which I attended her, there was no hæmorrhage. In the present instance "about a quart" of blood came with the placenta, but none afterwards.

CASE XI. Mrs. F., October 10, 1875. Third labor. Patient of nervous temperament. "Copious hæmorrhage immediately after expulsion of placenta, which ceased in fifteen minutes, and did not recur. Womb contracted well."

CASE XII. Mrs. T., January 14, 1876. Second labor. Profuse but not alarming hæmorrhage followed the expulsion of the placenta, and the patient was somewhat faint, but there was no recurrence of the bleeding.

CASE XIII. Mrs. C., January 31, 1876. "Rather more blood than usual followed the expulsion of the placenta." I had attended the same patient in her two previous labors, in neither of which was there any hæmorrhage, although she was etherized on both occasions.

In order to study to more advantage the twelve cases of serious hæmorrhage, in respect to cause, it will be convenient to arrange them in a condensed form, as follows:—

Case I. No obvious cause.

Case II. No obvious cause; ether in two previous labors, without hæmorrhage.

Case III. (Same patient as Case II.) Perhaps fatigue and anxiety.

Case IV. Tedious and difficult labor. Forceps.

Case V. No obvious cause. Ether in several previous labors, without hæmorrhage.

Case VI. No obvious cause.

Case VII. No obvious cause; ether in two previous labors, without hæmorrhage.

Case VIII. Lingered labor, inefficient pains. Forceps.

Case IX. (Same patient as Case VIII.) No obvious cause, unless inefficient pains.

Case X. Tedious labor, inefficient pains. Forceps.

Case XI. No obvious cause. Small amount only of ether used. Ether in two previous labors, one of which was followed by slight hæmorrhage, the other by none.

Case XII. No obvious cause. Ether in one previous labor, without hæmorrhage.

Thus in seven (and perhaps eight) of the cases, including Case III., of serious hæmorrhage, there was no obvious cause for the complication, unless the ether be so considered; but in six of them the patients had inhaled ether previously or subsequently without hæmorrhage. In three other cases the labor was tedious or difficult, and terminated by forceps. It seems to me hardly fair to attribute the hæmorrhage to ether in any of the cases; at any rate it could be considered the sole cause in only seven, or about five and one half per cent. of the whole number observed, which, I suppose, would not be a large number under any circumstances.

There is one circumstance to which I attribute considerable influence in the production of hæmorrhage in these cases. The social condition of nearly all the patients was unfavorable to vigorous health and muscular development. Among hard-working women, who spend a considerable portion of their time in the open air, or in bodily labor, we may naturally expect a more vigorous uterine contraction after labor than in those whose lives are comparatively easy, who are chiefly occupied in-doors, and who do no hard bodily work. Accordingly, if we examine the statistics of lying-in hospitals we shall find the proportion of cases of dangerous hæmorrhage to be small. How far, under these predisposing circumstances, the employment of anæsthetics might tend to promote the complication of hæmorrhage, if at all, can be determined only by the comparison of a larger number of cases than I have been able to collect.

It is sometimes remarked that the use of ether in childbirth seems to slacken the pains, both in frequency and in strength, and tends to prolong the duration of labor, and consequently to favor the occurrence of hæmorrhage by paralyzing uterine contraction. It is difficult to judge, however, whether the use of ether really retards the pains in any given

case, because we do not know how the labor might have proceeded without it. Few things are more tedious than waiting by the bedside of a woman in labor, and our impatience may lead us to attribute delay to the ether, when the real cause is something else. According to my own observation, ether has no effect in retarding a *rapid* labor, and I have not seldom seen the pains become more frequent and stronger under its use in labors which were not rapid.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.¹

BY R. H. FITZ, M. D.

PATHOLOGICAL ANATOMY.

Ossified Hæmatoma of the Dura Mater. — The possibility and way of a cure for the bloody tumor of the dura mater is suggested by Paulus,² who describes the appearances in a specimen accidentally discovered. The rarity of the condition mentioned is referred to.

Two cysts with bone-like walls were found in the region of the parietal protuberance, and contained a brownish mass, easily crumbled, which was regarded as decomposed blood. The walls of fibrous tissue were calcified, in part actually ossified, and the innermost layers were of a brownish color. The brain presented no other change than a corresponding depression.

Results of Concussion of the Brain. — Willigk³ describes the histological changes found by him in a case of this sort. The interval between the accident and death was rather more than three months. The pons varolii was swollen and contained an extensive softened portion of a spotted dark-red color, extending into the right cerebellar hemisphere. The pia mater of the pons, medulla oblongata, and spinal cord was of a dirty brown color. The medulla oblongata and the upper cervical region of the spinal cord were somewhat softer than usual. There was no evidence of recent hæmorrhage, but the red color of the softened region was due to injection of the dilated blood-vessels. The surrounding brain substance was abundantly infiltrated with lymphoid cells, in part fatty degenerated, which surrounded the vessels as a sheath. The walls of the vessels were fatty degenerated in spots. Pigment, whether free or in round cells, was rarely found in the vicinity of the vessels. The color of the pia mater was due to an increase of the pigment cells often normally found in the region referred to. The smallest blood-vessels, especially the capillaries in the various parts of the brain and

¹ Concluded from page 450.

² Dissertatio. Erlangen. Centralblatt für die medicinischen Wissenschaften, 1875, xi. 686.

³ Prager Vierteljahrschrift, 1875, lxxviii. 19.

cord, contained spots of fatty degeneration in the elements of their walls. Sections from the hardened pons presented an almost cavernous appearance, from the close approximation of the walls of the dilated vessels.

But few well-preserved ganglion cells were found within the softened portion; in their stead were numerous groups of two, three, or more nuclei to be distinguished from wandering cells by their size, shape, definition, and behavior with carmine. They presented all the appearances of an advancing process of proliferation. Some of these groups showed the remains of a finely granular protoplasm. A few distinctly preserved ganglion cells contained two nuclei or nuclei doubly or trebly divided. Other ganglion cells were found swollen, with enlarged nuclei like vesicles, and containing two or more nucleoli.

It was considered that the extensive disease of the blood-vessels of the brain and spinal cord, though unimportant in degree, was a result of the concussion of the brain, and that a local cloudy swelling of the ganglion cells had occurred, with a proliferation of their nuclei and a destruction of their protoplasm. The possibility must be entertained that similar alterations, not evident at the outset, may progress and perhaps furnish a basis for the mental affection often following injuries to the skull.

Histological Changes in Hydrophobia. — The following changes were observed by Kolesnikoff,¹ who examined ten hydrophobic dogs. The appearances were most marked in the sympathetic and spinal ganglia. The blood-vessels were distended and injected, and occasional extravasations of red blood corpuscles and collections of white blood corpuscles (migrated) were found in the perivascular spaces. The walls of the vessels were occasionally filled with hyaline masses, which at times formed thrombi, plugging the vessels. These were evidently due to a metamorphosis of the blood corpuscles into hyaline bodies. Round, indifferent cells, five to eight in number, were found in the pericellular spaces, also within the ganglion cells. The latter were thereby changed in shape, jagged or excavated where the round elements had fallen out. At times, groups of round, indifferent cells were found in place of the ganglion cells. Similar changes were found in isolated ganglion cells. These changes are considered as similar to those found by Popoff² in typhoid fever, and after traumatic violence.

Chronic Inflammation in the Posterior Mediastinum. — The alterations of the organs of the posterior mediastinum resulting from chronic inflammation and contraction of the tracheal and bronchial glands and their enveloping tissue make the subject of a paper by Tiedemann,³ of which only some of the conclusions can be given.

¹ *Centralblatt für die medicinischen Wissenschaften*, 1875, 1. 853.

² *The JOURNAL*, October 21, 1875, page 472.

³ *Deutsches Archiv für klinische Medicin*, 185, xvi. 575.

In the great majority of the cases examined, eighteen out of twenty-one, a disturbance was produced in the vicinity of the glands. These were shriveled or destroyed, and the periglandular tissue was callous. Traction and constriction of the food, air, blood, and nerve tracts in the posterior mediastinum resulted. Single and multiple diverticula of the œsophagus were found much more commonly than is usually considered, and were most often present in the anterior wall near the tracheal bifurcation. Perforation and consequent death may result. The perforation may take place from within in consequence of bodies swallowed with the food, or from without by softening of the diseased adjoining gland. Atrophy of the bronchial mucous membrane, cicatrices from healed perforations, also tracheal diverticula may occur. Of greater importance is the formation of tracheal and bronchial stenoses. The effect upon the blood-vessels is a constriction of the pulmonary artery or of the pulmonary veins, the latter more rarely. Obliteration of the vena azygos, the inferior and superior venæ cavæ, the right innominate vein, or of the bronchial arteries may occur.

Compression of the nerves is also induced, of one or both pneumogastrics, or of the left recurrent laryngeal nerve.

Results of Pulmonary Embolism. — It has been very frequently observed that infarctions are present in certain cases of embolism of the branches of the pulmonary artery, while in other cases where the obstruction is alike complete, no such result follows. Cohnheim and Litten¹ have endeavored to explain the varying conditions in such cases. Experiments were made upon dogs and rabbits for the purpose of ascertaining the relation of the blood-vessels to the pulmonary circulation.

In order to avoid the disturbing element of mechanical pressure from without, the animals were permitted to inject themselves, pigment granules being slowly introduced into the circulating blood. It was found that when an embolus (paraffine) was allowed to enter a branch of the pulmonary artery so as to completely obstruct it, the pigment subsequently introduced did not enter the region of the peripheral distribution of the obstructed artery. The granules used were larger than the diameter of the pulmonary capillaries. It thus became evident that the branches of the pulmonary artery are true terminal arteries, and have no arterial anastomoses with each other, a fact which Rindfleisch had already stated. The varying phenomena of pulmonary embolism could not, therefore, be explained on the ground that infarction occurs when the embolus is stopped beyond the place where collateral branches are given off, and does not arise when the obstruction takes place nearer the heart.

Apart from this proof that the branches of the pulmonary arteries

¹ Virchow's Archiv, 1875, lxxv. 99.

are true terminal ones, it was further ascertained that the capillary region of the bronchial arteries and that of the pulmonary vessels are distinct, not anastomosing with each other. The pulmonary artery of one lung was obliterated by a ligature, and pigment was introduced into the femoral artery. All the organs of the body became uniformly injected with the coloring matter, except the lung whose pulmonary artery had been tied. The bronchial walls in this were injected, however, but not more so than in the other lung. The bronchial arteries could not, therefore, be considered as sufficient to supply with blood a portion of the lung the pulmonary artery of which had become obliterated by an embolus. The blood entering such a region must necessarily come through the neighboring pulmonary capillaries. Other experiments showed that such was the case, and also that the current was slow, and small in amount. This slight and sluggish flow of blood was evidently sufficient to nourish the pulmonary vessels, as it had already been arterialized, having come through pulmonary capillaries.

When the circulation in such a part is below a certain minimum, the hæmorrhagic infarction occurs as usual from venous regurgitation and subsequent diapedesis from the engorged capillaries and veins.

The conditions favoring an infarction of the lungs are, then, an abnormal sluggishness of the capillary current and an increased resistance in the pulmonary veins. The former occurs in multiple embolism of the lungs and in enfeeblement of the right side of the heart, such as may result from protracted fevers, fatty degeneration, etc.

The obstructed venous outflow plays an important part in the origin of hæmoptoic infarction as a result of valvular disease of the left side of the heart without simultaneous thrombosis of the veins of the body. A simple passive congestion can hardly produce the circumscribed infarction, but decidedly favors its development in the presence of a local arterial thrombosis or a marked degenerate change in the walls of the arteries.

The experiments further showed that serious results are likely to follow an embolism of a branch of the pulmonary artery, even where no infarction occurs, for so small an amount of blood passes through the part that it can be of little avail for the respiratory function.

These investigations also explained the frequent occurrence of a zone of aerated tissue between the embolus and the mass of infarction. The collateral capillary circulation suffices to supply the intermediate portion with blood, but not the more remote parts.

Changes in the Intestine from Embolism. — At a meeting of the Lower Austrian Medical Society, Biesiadecki¹ called attention to the appearances found by Parenski in the case of a woman eighty-three years of age. At least three inches of the intestine were found quite

¹ Allgemeine Wiener medizinische Zeitung, December 21, 1875.

dead, resembling the detached portion of an incarcerated hernia. A similar smaller portion was also found. All the coats of the affected parts were converted into a frangible yellow mass. The mucous membrane presented occasional patches of diphtheritic exudation. Apart from these changes the only process present was multiple embolism of the superior mesenteric artery.

Another similar case was observed also in an old woman. Other instances indicated that the mucous membrane alone might be altered in these cases. Certain intestinal ulcers are likely to be thus produced, and the emboli in their vicinity may be readily demonstrated. The occurrence of stenosis after the healing of such ulcers is quite probable.

Results of Ligature of the Renal Vein.—Buchwald and Litten¹ endeavored to ascertain whether interstitial nephritis might result from passive congestion of the kidney. The previous experiments in this direction are incomplete, as the animals used have died within four days after the renal vein has been tied.

In the present series of experiments some of the animals, dogs and rabbits, lived eight weeks, and by examining the animals at various periods the different stages in the histological process were ascertained.

Immediately after the ligature was applied the kidneys became swollen and of a dark bluish-red color. Fat drops appeared in the cortical portion within twelve hours after the operation.

The kidneys were œdematous and minute hæmorrhages took place. The capillaries became dilated, the Malpighian corpuscles only moderately so. In the subsequent thirty-six hours these conditions increased in intensity and the color became somewhat modified by the yellow fatty degenerated portions of the cortex. The extravasations of blood were now evident to the naked eye, and the affected kidney increased markedly in weight and size. About the sixth day a relative diminution in the size and weight of the affected kidney took place, and it became decidedly smaller. The changes were purely degenerative, there being no evidence of inflammatory processes. The diminution in the size of the organ was due essentially to a degeneration of the epithelium and the disappearance of numerous tubules, the glomeruli being tolerably well preserved. At times numerous collateral venous channels outside of the kidney were opened or widened.

¹ Virchow's Archiv, 1876, lxii. 145.

WAGNER'S GENERAL PATHOLOGY.¹

NEARLY two years ago it was announced that a translation of Wagner's famous handbook was in preparation. In the mean time the sixth German edition has been issued and the volume now before us becomes all the more valuable from the delay in its publication. In 1862 Wagner edited the first edition, under the title Uhle and Wagner's Manual of General Pathology. So far as Uhle was concerned the work was a posthumous one, his manuscripts having been transferred by his widow to the actual editor. The book at once became popular; it contained in a compact form such information as was needed by every physician, and presented the condensed results of valuable recent observations.

Nearly every two years a new edition became necessary, in order that additional facts and evidence might be incorporated and that the original matter might become so modified as to be in harmony with existing theories and methods of observation. Every new edition thus became essentially a new work, and the German editor and publisher have undoubtedly had reason to be satisfied with the reward of their labor and risk.

What may be called modern general pathology has never before been presented in the English language in so complete a form. Its foundation was securely and most elaborately laid in Virchow's Cellular Pathology, but the plan alone of the superstructure could be carried out in that thoroughly original and most suggestive work.

In the various volumes on theory and practice published from time to time an attempt has been made to present certain ideas which should serve as the basis for the rational knowledge and study of disease. How far such have fallen short of the existing standard can be seen only too readily by a comparison of these works with the present volume. The subject has become all too broad to be treated so slightly, and all too deep to be studied so superficially. Many of the very terms even daily employed in modern medicine find no mention in these treatises, and if an explanation is attempted such is often incomplete or erroneous.

The greeting to be given to this manual ought consequently to be a general one, and all the more cordial as the reader is put under an obligation. He is sure to be constantly reminded of this, and by no one more often than by himself.

The book is divided into four parts. The first treats of the nature and extension of disease, its symptoms, diagnosis, prognosis, course, and termination.

Part second comprises the causes of disease, under which the internal causes are considered as inheritance, age, sex, constitution, etc. The external causes are also entered into at some length, such as the varying conditions of the atmosphere, the soil, climate, dwelling, clothing, food, occupation, veg-

¹ *A Manual of General Pathology.* For the Use of Students and Practitioners of Medicine. By ERNST WAGNER, M. D., Professor of General Pathology and Pathological Anatomy in the University of Leipzig, etc. Translated from the Sixth German Edition by JOHN VAN DUYN, A. M., M. D., and E. C. SEGUIN, M. D. New York: William Wood & Co. 1876.

etable and animal parasites. Finally is a brief statement of what is known concerning contagious and miasmatic diseases.

By far the greater portion of the volume is occupied by the third and fourth parts; the former includes general pathological anatomy and physiology, the latter the pathology of the blood. The physiological considerations are those of interest in connection with general pathology. That the local disturbances of the blood and lymph circulation may be understood, the normal relation of these fluids to the body in general must be borne in mind. The properties of the white-blood corpuscles are entered into in detail, a knowledge of which is indispensable at the present day. So with regard to the formation of fibrine, which is so important an element in the inflammatory processes. Thrombosis and embolism, hæmorrhages and dropsies, are fully described.

Then follows the section on inflammation, which must have been very essentially modified since its first appearance in 1862.

Under the disturbances of nutrition we find the various degenerations, as the albuminous, fatty, pigmentary, and calcareous infiltrations, the fatty and amyloid degenerations, the mucous and colloid metamorphoses.

These are spoken of as retrograde metamorphoses, and are distinguished from the progressive metamorphoses. Under the latter head comes the new formation of tissues, not only such as occurs during repair, but also such as may result from disease.

The various tumors are then classified and described in accordance with the scheme elaborated by Virchow, in his famous work not yet finished.

The blood still has its pathology, notwithstanding the many blows the humoral doctrines have received during the past thirty years. What is left may be found, carefully guarded, at the end of the volume. The dyscrasæ or anomalies in the composition of the blood are quantitative or qualitative differences in one or more of its constituents, whether the same result from changes going on in the circulating blood, or from the presence of injurious substances received from without. Acute and chronic anæmias, chlorosis, and Addison's disease find their place here. Leucæmia and pseudo-leucæmia (notwithstanding the objections of the translators to the term), melanæmia, jaundice, uræmia, diabetes, and pyæmia are also described, to say nothing of other dyscrasæ less familiar, as acetonæmia, hydrothionæmia, etc. The chapter on fever is by Professor Thomas, who has taken a special interest in this subject and has contributed to its literature.

Where a work has been done thoroughly it seems uncalled for to lay stress upon certain portions of it. The general scope of the manual has been indicated for the purpose of attracting the attention of those interested to what may be found in it. The great question in medicine at the present day undoubtedly relates to the recognition and isolation of the specific poison of contagious and infectious diseases. It need not be mentioned that what is known about this subject finds its appropriate place throughout the volume.

Bacteria and micrococci are described in detail among the vegetable parasites. The relation of the underground water to the origin of epidemics is referred to in connection with the soil, food, and drink. The question is again

presented in a more prominent form, under the contagions and miasmata, the epidemics and endemics. It is seen in connection with thrombosis and embolism, with inflammation in the diphtheritic process, and is further associated with gangrene. It plays an important part in the pathology of tuberculosis, and forms the essence of the article on pyæmia. Not till the very close of the book is it lost to sight where sepsis appears as an important factor in the production of fever. This serves merely as an instance of what may be expected from the book.

Clear and concise statements, short and simple sentences, present the condensed thought with which this volume is filled. This is as it should be. Those who desire more than carefully arranged results will find, in the copious bibliography and abundant intercalated references, the sources from which the information has been derived. An index of authors and another of subjects render invaluable aid. We consider this book as one of the most valuable of the many medical works translated from the German into English. Its application is general, for it will be found not only upon the shelves of the surgeon and physician, but also in the hands of the medical student, who can rely upon no safer and surer guide through the obscurity which surrounds the causes and phenomena of disease. The modern explanation of "catching cold" may be seen, as well as the more elaborate theories with regard to fever. Above all it contains what is to be found in no other single volume, — it is filled with a complete and comprehensive series of systematically arranged abstracts, which form an epitome of general pathology.

The translators are to be commended for the manner in which they have done their work, and are to be envied the endurance which has persisted to the end. The publishers are so well known to the medical profession that their name on the title-page is a sufficient guaranty of the excellence of the printing, paper, and binding.

R. H. F.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

EDWARD WIGGLESWORTH, JR., M. D., SECRETARY.

JANUARY 3, 1876. *A Case of Ovarian Tumor.* — DR. BOARDMAN read a paper upon the subject. (Reserved for publication.)

Cicuta maculata and *Gelsemium sempervirens.* — DR. BOLLES, in connection with some remarks upon several recent cases of poisoning reported in the daily papers, showed specimens of the *cicuta maculata* and of the *gelsemium sempervirens*. The former he considered a strong depressor of nerve force.

DR. WIGGLESWORTH mentioned that the tincture of *gelsemium sempervirens* had been recently recommended for the treatment of neuralgia, given in doses of not more than ten drops and repeated once or at most twice, at intervals of one and a half to two hours. In *The Lancet* of November 6, 1875, Spencer Thompson gives great praise to this remedy, used as mentioned, for the relief of

toothache and neuralgia of the jaws, for which he considers it almost a specific. Dr. Thompson's doses were, however, twenty drops instead of ten.

Broken Skulls. — DR. BOLLES read a paper upon fractures of the bones of the skull.¹

DR. T. B. CURTIS alluded to the difference in size of the orifices of entrance and exit of projectiles. In the skull the first table encountered is pierced by the projectile, the second by the projectile plus the fragments accompanying it, and is consequently larger; where a punch is used this effect is not noticed, for a punch furnishes a cavity to contain all *débris*.

DR. BOLLES concurred in this, adding that the fracture of the outer table, first encountered, was larger than the projectile, and that the inner fracture was caused by this larger one acting like an original projectile. This conically increasing force might also be regarded as acting in this manner on each of many layers. Moreover, the outer table is supported, the inner is unsupported. Where a punch has become filled and its cavity obliterated, it acts like a solid body.

Trephining. — In reply to Dr. Chadwick, DR. BOLLES said that he had studied some forty to fifty cases of trephining, and the use of the trephine was indicated, he thought, where in punctured wounds the injury was local, the depression marked, and the fragments small. But when, as from falls, the damage extended beyond the seat of injury, less benefit could be anticipated from its use. The contusion of parts distant from the wound, and therefore not helped by trephining, is the real injury resulting from sharp, quick blows. Cases where effusion is present are the ones which give brilliant results after trephining. Severe lacerations of the brain occurring without any fracture of the skull are not due to its striking against the skull, but rather to the transmission of the external shock by means of a series of waves.

DR. FITZ stated that the wave theory was the one held also by Virchow. When injuries to the base of the brain are received, such occur usually where the middle lobes are in more direct contact with the skull, rather than where a larger amount of tissue intervenes. In a specimen of Dr. Giddings, from a case of death following a fall, Dr. Fitz had found injuries of the brain itself without any fracture of the skull, and had attributed them to some previous affection, the extensive character and seat of the injury suggesting that it was a case of apoplectic hæmorrhage, and, as such, cause rather than effect of the fall.

DR. DWIGHT thought the theory that the brain broadens laterally in falls is of doubtful truth. The lateral extension is prevented by the tendency to a vacuum above and below.

DR. BOLLES defended the theory, calling attention to the fact that flattened spheres fissure vertically, as may be seen in the familiar case of doughnuts and fishballs.

Ball-Wounds. — DR. GREEN, referring once more to the size of ball-wounds of the skull, suggested that the larger fracture of the inner table might perhaps be due to diminished velocity.

DR. BOLLES replied that when balls go through the opposite side from

¹ City Hospital Reports for 1876.

that of entrance, the aperture of the inner table of the wound of exit may be smaller than that of the inner table of the wound of entrance.

DR. ROWE reported the two following cases, and DR. FITZ showed the specimens.

Aneurism from Acute Endocarditis. — Mrs. A. G., eighty-six years old, has had senile dementia for two years, and has been at the Boston Hospital for the Insane for the past thirteen months. She was found on admission to have partial hemiplegia of the right side, which gradually grew worse, confining her, within a few weeks, to her bed, from which she never afterwards arose. Her disease ran the usual course of senile dementia till November 6th, at which time she was bedridden and her mind in a state of fatuity. On this day, while the nurse was sitting by her, she suddenly breathed stertorously and gasped for breath. Lividity of the face and upper part of the body followed, and increased in intensity until death. There was complete unconsciousness. Dr. Rowe saw her not more than three or four minutes after the beginning of the attack, but only in time to see her gasp once or twice. At the time of her death this was attributed to cerebral hæmorrhages; but since then, her age, the known existence of calcification of the arteries, and the manner of her death made it seem probable that there was a rupture of some atheromatous or calcified cerebral artery.

Rupture of the Heart. — F. B., male, forty-five years old, formerly a clerk, has been insane for the last seventeen years, which he has spent in different hospitals in this State. The form of his mental disease was chronic dementia, he being stupid and incapable of caring for himself. He had had no intercurrent acute physical disease, as far as known, and there is no record of rheumatism.

December 13th he was found to have soiled his bed in the night, and he had several loose stools during the morning. He seemed more stupid than usual, but showed no signs of any constitutional disturbance. The only noticeable symptoms were the diarrhœa and a pulse of sixty. The former ceased on rest in bed and change of diet.

December 14th. More feeble; no diarrhœa. Took no nourishment this morning. Pulse sixty and regular. Respiration thirty and labored. No cough or expectoration. The physical signs of the chest showed solidification at the apices of both lungs, attributed to phthisis. The heart sounds were labored, the heart beating with a heavy thumping against the walls of the chest. Præcordial area of dullness enlarged. Pericardial effusion was diagnosed. Small doses of diffusable stimulants were exhibited, and stimulating diet was administered at short intervals. Early in the morning his pulse was found to exceed one hundred, intermitting every third beat. Respiration increased to forty-five. Moist râles over all parts of both lungs. Ecchymosed spots appeared spontaneously on the face, sides of the body, arms, legs, and ankles. He failed steadily, the pulse growing more intermittent and the ecchymosed spots growing deeper in color. He died at 10.30 P. M., the second day of his illness.

Nervous and Muscular Paralysis. — DR. J. J. PUTNAM spoke of the case of a boy with paralysis of the sixth nerve, causing a paralysis of the abducens

muscle. He became dizzy and fell, but without injuring his head. He was senseless for ten or fifteen minutes and was carried home. Next morning when he tried to raise his head he felt dizzy. He continued in this condition for two or three days, with a little vomiting at times. In a few weeks the eye improved, and motion returned, etc., like an ordinary rheumatic attack. The question is whether the vertigo was due to this paralysis, the boy having been previously healthy and never subject to vertigo.

DRS. WADSWORTH and WILLIAMS doubted that paralysis of the abducens could so suddenly and easily occur.

Dermal Curette or Scraping Spoon. — DR. WIGGLESWORTH called the attention of the profession to a dermal curette or spoon for scraping away and gouging out neoplasms and hypertrophies of the skin. It was originally devised for the womb by Récamier, and applied to the treatment of skin diseases by Volkmann, of Halle. It has also been used by Hebra for some three years. Dr. Wigglesworth had thus far made use of it in only three cases, but in these with remarkable beneficial results. It has been used by no one else here as yet, so far as is known.¹

FEBRUARY 7, 1876. *Metric System of Weights and Measures.* — MR. JOHN P. PUTNAM spoke by request upon the metric system of weights and measures, and showed illustrated charts representing the appearance and size of the various units of weight, measure, and capacity. These were intended for schools and public positions. The society voted to memorialize Congress (through the executive committee of the society), and request that after a stated period the use of the metric system should be made compulsory by law; also, to send a copy of Mr. Putnam's remarks as approved of by the society to Mr. Philbrick, chairman of the committee on state education. For the remarks in full, see the *Daily Advertiser*, February 10, 1876.

Two Cases of Infantile Paralysis. — DR. WEBBER then read the regular paper for the evening. (Reserved for publication.)

Hemiplegia with Facial Paralysis. — DR. EDDES spoke of a case which he saw last fall, where a febrile attack, with more or less loss of consciousness, in a child of fourteen months, merged into a condition of left hemiplegia, much more marked in the face than in the limbs. Recovery took place with considerable rapidity, the remaining trace of the paralysis, which at last accounts had not disappeared, being a slight distortion of the face. A droop of the lid upon the *other side*, together with a temporary dilatation of the pupil, would point, according to Erb, as quoted by Dr. Webber, to a lesion of the crus cerebri. He also remarked that he was glad to learn that Dr. Webber could find so many exceptions to the rule laid down by nearly all authors, that complete paralysis of *all* the distribution of the facial, and especially to the orbicularis palpebrarum, points to a peripheral lesion. He had recently seen a case, which could not, it is true, be *proved* to be an exception to this rule, but where a complete facial hemiplegia, including paralysis of the orbicularis, coincided with other symptoms, in particular a tremor of the left hand and foot preceding the paralysis, all of which would lead one to assume the existence of some central lesion.

¹ The JOURNAL, February 10, 1876.

Rupture of the Œsophagus. — DR. FITZ showed a case of rupture of the Œsophagus from muscular action, and read Dr. Allen's report of the case, which is reserved for publication in full. Drs. Knight and Stedman had seen the case in consultation.

DR. KNIGHT gave a brief account of the case as he saw it, and stated that such cases are usually followed by death within forty-eight hours. Here the patient had lived a week. He vomited several times during the first few days of his illness. All the cases known to Dr. Knight had occurred in drunkards, in vomiting after debauches, except the case of a washerwoman under the care of Oppolzer. In only one case, reported by an English surgeon, was there simultaneous rupture into the air-passages, as Dr. Fitz thinks occurred here, causing the remarkable emphysematous swelling. Auscultation of the Œsophagus while the patient swallowed water had been suggested by Hamburger. Eight to ten cases of rupture of the Œsophagus have been reported by Bamberger, who coincides in his views with Oppolzer.

DR. FITZ added that there had been in this case no previous ulcerative disease, as is commonly the case. The long duration of life was due to the fact that no large blood-vessels were injured at the time of the rupture.

Invagination of the Intestine. — DR. HILDRETH reported the case. The tumor was detected from the rectum. A child, aged seven, was seized on a Wednesday with vomiting and purging. Thursday blood passed from the bowels. Distention of the bowel with air and with water was tried, but the child died on Saturday.

Vertigo. — DR. J. J. PUTNAM referred to the case which he reported at the last meeting, and stated that Hughlings Jackson says vertigo may occur in such cases before any paralysis is noticed.

Use of Elastic Muscles. — DR. J. J. PUTNAM showed a case of chronic lead-poisoning, which had improved greatly and rapidly under the use of an elastic muscle, taking the place of the extensors.

DR. TARBELL said this was used by English surgeons for talipes, and he had read of two cases like the one shown, where passive motion and the elastic band were used without electricity with good results:

A Case of Multiple Sclerosis of the Brain and Spinal Cord in a Child Twelve Years of Age. — DR. J. J. PUTNAM reported the case.

DR. CURTIS distinguished chorea from paralysis agitans and locomotor ataxia by the random and unforeseen character of the motions, as if the patient were pulled by strings. In paralysis agitans there is a rhythmic action, as if from two antagonistic sets of muscles. In locomotor ataxia the motion is the result of a distinct volition, though not obeying the will of the patient.

DR. ELLIS had seen the patient last October, and had regarded the case as one of "questionable incipient chorea," and now asked the distinction between this and a sclerosis.

DR. PUTNAM said that in this case the oscillations were rhythmic. In chorea the exalted motions take place also when the patient is at rest. In this there is no movement of the face, except perhaps a slight trembling of the lips. Words are slowly pronounced, dwelt on, and run regularly together. The muscles do not twitch as in chorea.

True Anchylosis of Vertebrae. — DR. C. B. PORTER showed a rare specimen of true anchylosis of vertebrae with no evidence of caries or loss of substance of the bodies, or any other part. The vertebrae were the four upper lumbar, ankylosed in pairs, the first and second, and the third and fourth. A median section showed that the space normally occupied by the inter-vertebral substance was filled by bone showing the true cancellated structure throughout. There was a trace of the outer vertebral space in the two upper, none in the lower. In the lower pair this condition extended into the articular processes and laminae (and spinous processes, beginning in the upper), they being firmly united by bone, and the ligamenta subflava ossified. There were also growths from the edges as in chronic arthritis, and the bones were quite light. The specimen was from a dissecting-room subject, and without history.

Digestion of Fats. — DR. H. P. BOWDITCH stated that Bernard's theory according to which the pancreatic juice plays such an important part in the digestion of fats, received a severe blow from the observations of Frerichs, Lehmann, and others, showing that fat could be digested even after ligature of the pancreatic duct, and from those of Colin, who proved by a quantitative examination of the chyle of cows that the amount of fat in that fluid was not affected by the presence or absence of the pancreatic juice in the intestines. Most physiologists have therefore been inclined to attribute to the pancreatic juice a certain influence in the digestion of fats, without assigning to it any exclusive function of this sort.

At the same time that Bernard discovered the power of the pancreatic juice to form an emulsion with fats, he also noticed its property of decomposing neutral fats into fat acids and glycerine, but he did not regard this observation as having any physiological significance. Kühne's observations led him to the conclusion that the fat acids thus set free unite with alkalies in the intestine, forming soaps which are then absorbed by the blood-vessels. Recent observations have, however, shown that no very large amount of fat can enter the system in this way, for soluble soaps when mixed with the blood are found to be precipitated by the lime and magnesia salts contained in that fluid.

Within a few years, observations have been made which throw a great deal of light on the importance of the power of the pancreatic juice to decompose neutral fats. It was noticed at about the same time by Brücke and by Hofmann that a solution of sodic carbonate forms an emulsion with a neutral fat if it contains a slight admixture of a free fat acid, a soluble soap being thus formed which is an excellent emulsifying agent for neutral fats. In view of this fact Brücke regards the action of the pancreatic juice in the digestion of fats as consisting in the liberation of a certain amount of free fat acids, which then unites with loosely combined alkalies present in the intestine, forming a soap which acts as an emulsifying agent. According to this theory the pancreatic juice simply insures the presence of fat acids in the intestines to form soaps there with the alkalies. If the ingested fats contain already an admixture of free acid, the pancreatic juice is not essential for their digestion. This furnishes a probable explanation of the discordant results of the earlier observers, and suggests also a way in which the bile may contribute to the digestion of fats, for this fluid contains in the biliary salts soda in feeble combination, ready to form soaps with free fat acids.

Hofmann has recently undertaken a thorough study of the chemistry of fats. As a preliminary to the investigation, it was necessary to discover some means of detecting free fat acids when mixed with neutral fats. Litmus is of no use for this purpose, for this substance reacts only with aqueous solutions, and only those fat acids redden litmus paper which are soluble in water. Of various substances experimented with, rosolic acid seemed to answer the purpose best. A two or three per cent. alcoholic solution of this acid neutralized with baryta has a deep red color which is immediately discharged by acids. The test is best applied by dissolving the fat under examination in ether and adding a few drops of the rosolic-acid solution. If the fat contains a free acid, decolorization is at once produced. Tested in this way it is found that absolutely neutral fats do not exist in nature, a slight admixture of free fat acids being invariably detected.

THE PRESENT ASPECT OF MEDICAL EDUCATION.

It is not many weeks since we expressed the hope that some representative school, such as the medical department of the University of Pennsylvania, should set the example to many hesitating faculties and inaugurate a new system of study, similar to that which has been so successfully carried out at Harvard University. We rejoice to learn that the faculty of the University of Pennsylvania has had this matter for some time under serious consideration, and that a committee appointed from the faculty and the trustees of the university has reported in favor of a plan of study similar to that in vogue at the school in this city. We regret to see that no immediate change has been decided upon. The faculty hesitates to adopt this plan until an endowment fund shall have been raised; for the purpose, we presume, of protecting their salaries. This savors of timidity, which, in the light of experience already gained, somewhat tempers our enthusiasm for the would-be reformers. We wish them success most heartily, however, in their undertaking. We turn from this pleasant prospect and strain our eyes in scanning the western horizon for some glimmer of the new day which is dawning upon us. It is true that the Chicago Medical College was the first school in the country to adopt the graded course of study, but we find the one-term system still prevailing, and we fail to discover any guarantees that this school gives any more instruction than those which retain the old system.

There is a bill before the Ohio legislature providing for a course of study which would satisfy the most exacting reformer. Preliminary examinations are to be required in all medical schools, the State being represented upon the examining board. Persons appearing before this board must have studied medicine for two years with a physician, and, having passed the examination, must spend three years more in the medical college. The bill further provides that it shall be unlawful for any one to practice medicine in the State who has not graduated according to its provisions. There is little prospect that this bill will be passed, and perhaps it is better that reform should not emanate from the State House. It is, however, an encouraging indication of the drift of professional opinion in that State.

These few rays of light from the West are sadly dimmed by the dark cloud hanging over that embodiment of all the worst features of the old system, the "Kentucky-Louisville" Medical School. The *Louisville Medical News* has done good service for the cause of education in exposing the abuses of this institution. Any enterprising young man may, by a series of ingenious devices, obtain at a merely nominal price a medical diploma within the short space of nine months. A description of the "beneficiary scholarship" system of the twin schools maintained by one and the same faculty, and other peculiarities, is beyond our limits, and of too painful a character to dwell upon at length.

We think the American Medical Association, whose annual meeting is close at hand, could not employ its time better than in giving a hearty indorsement to the pioneers in educational reforms and in investigating those abuses which are, after all, but the natural results of a rotten system.

THE DISCUSSION IN LONDON ON SYPHILIS.

THE protracted but not uninteresting debate on syphilis before the Pathological Society of London was brought to a close on the evening of the 4th instant. The debate was opened on February 1st by Mr. Jonathan Hutchinson, who began with the assumption that the phenomena of syphilis, notwithstanding their great variety of detail of character, are due to one virus. He considered dualism to be dead, and the soft chancre to be due to contagion with inflammatory products produced by syphilis, but not, as a rule, containing its germs. He assumed, also, that in syphilis we have to deal with a specific fever of prolonged but definite stages, which is produced by contagion only, which has a period of incubation, of outbreak, of efflorescence or exanthem, and which, in exceptional cases, is followed by sequelæ — the so-called tertiary symptoms. Between these last and the symptoms of the earlier stage there is a most important distinction, in that they are never general, and only by accident symmetrical. They do not constitute another stage of a blood-disease, but by their constant non-symmetry appear to prove that the blood is not concerned. It appears highly probable that there is a period at which syphilis ceases to be a blood-disease, though the correct determination of this period is a matter of difficulty. The products of syphilitic inflammations are peculiar. The tendency to cell-growth is most remarkable. An avoidance of proclivity to suppuration, a tendency to cause death of the tissues affected and thus produce phagedænic ulceration or even sloughing, and a proneness to undergo rapid and complete absorption, especially when attacked by certain metals or their salts, are features which characterize the new-growths due to syphilis. So marked is the liability to phagedæna in syphilis that as a rule we may count this disease as directly or indirectly the parent of all phagedæna. Regarding the relationship between the several stages of syphilis, Mr. Hutchinson remarked that while their similarities are marked, so are their differences. There is a tendency to general and symmetrical development in the secondary stage, and to local, restricted, and unsymmetrical formations in that of sequelæ. In

the secondary stage the blood and all the tissues are involved, whilst in the later ones only certain regions, or it may be only single spots are affected. There is a spontaneous tendency to resolution of the new-growths and to absorption in the secondary stage, but it is exceptional in all tertiary products. In contrasting the course of inherited syphilis with that of the acquired disease, among the points worthy of remark are the severity of the secondary stage, often fatal; and, on the other hand, the frequent omission of all early symptoms, the remarkably long periods of latency which ensue after the cessation of the infantile symptoms, and the great rarity of most of the conditions which in the acquired form are ranked as tertiary. In conclusion, Mr. Hutchinson argued against the assertion that syphilis aids in producing scrofula and lupus.

In the discussion that followed, both Mr. Lee and Dr. Drysdale expressed their belief in the distinctive character of the poisons which give rise to the soft and the hard chancre. Sir James Paget agreed with Mr. Hutchinson that in syphilis we have one malady and one virus, and also as to its being in nature a specific fever. He would further carry out the analogy by comparing the tertiary symptoms of syphilis to the sequelæ of other fevers. In the absence of symmetry in the sequelæ syphilis shows a remarkable resemblance to other acute fevers. As long as any manifestations of the disease occur, it is a blood-disease. He agreed with Mr. Hutchinson that syphilis no more predisposes to scrofula than any other fever does.

Dr. Wilks placed no meaning upon the terms primary, secondary, and tertiary. A man either has syphilis or he has it not. He believed that all the visceral changes are due to the peculiar morbid processes of the disease. Mr. Berkeley Hill thought there was considerable proof that syphilis continued to be a blood-disease from first to last. Those who suffer from the internal forms of syphilis are those who show fewest if any secondary external manifestations. Mr. Moxon, in commenting on Mr. Hutchinson's remark as to the symmetry of the secondary and the non-symmetry of the tertiary phenomena of syphilis, said that although secondary syphilis is symmetrical, yet it has no meaning, as it is invalidated by the "fallacy of universality."

Mr. Thomas Smith believed that syphilis was a disease *almost* to the end. The parent might transmit the disease to the end. A man without constitutional syphilis, that is, a blood-disease in the ordinary sense, could not transmit the disease to his offspring. The objection might be raised that there were other diseases, as gout, which might be transmitted from a father to his son without ever having affected the former, but syphilis was active and speedily so. Did ever a woman become gouty by bearing a gouty child? Sir William Gull regarded syphilis not only as a blood-disease, but as a flesh-and-blood disease. It exists in every tissue and fluid of the body. It continues to be a constitutional affection through the whole life of the man who has had it. "Syphilis once, syphilis ever; syphilis general, syphilis universal, in the man all the time he lives." It remains to a greater or less extent. He thought there was a distinctive odor to the disease. Mr. Simon thought Mr. Hutchinson demanded too absolute an answer to his questions. Instead of "yes or no," the answer ought to be "more or less." Mr. John Wood agreed with the two previous speakers that no definite line of distinction could be drawn

between the stages of syphilis. He called attention to the fact that possibly nations among whom the disease had widely extended were becoming syphilized, less susceptible to its influence.

To the criticisms on his opening address Mr. Hutchinson presented an elaborate reply. To his mind's eye the cryptogamic germ-poison of syphilis is as certainly present as if he had seen it under the microscope, and he thinks we might without impropriety speak of it as the *syphilitic yeast*. He still considers it consistent with fact to divide syphilis into stages, the degree in which the blood and tissues are relatively affected by it differing very much at the different periods. Availing ourselves of such facts as accident throws in our way we can produce but little evidence of prolonged contagiousness of the blood. All the accidents occur during the year or eighteen months which we count as the secondary stage, and most of them in the early part of it. There is every reason to believe that in the tertiary stage neither the blood nor even inflammatory secretions produced by sores which still bear the specific type can reproduce the disease. The cases in which syphilis is transmissible by inheritance for more than a year or two after its secondary stage appear to be very exceptional. Unless the risk of hereditary transmission did really cease early in the vast majority of cases, infantile syphilis would be far more common than it is. When consulted regarding marriage, Mr. Hutchinson has made it a rule to insist that before marriage a period of two years should elapse from the last of what he considers blood-symptoms. He has given this opinion often with anxiety, lest some day some one should bring to him a snuffling, spot-covered baby, and say, "See here, you said I might marry; just look at this!" Such an occurrence has, however, never yet happened to him. After the further consideration of the points which had been alluded to by the different speakers, Mr. Hutchinson closed with the expression of the hope that if the debate had not been a harvest it had at any rate been a seed-time, and that syphilis, long ago named by one of the great masters "the key to all pathology," may in the future be found yet more useful.

MEDICAL NOTES.

—The *Wiener Medizinische Wochenschrift* for March 11th contains a notice of a very extraordinary essay which was recently read by Dr. Rosenthal before the literary society of the North German students in Vienna. He stated at the outset that the majority of human beings are buried alive — in a condition of apparent death only. He maintained that all the attempts hitherto made for proving death or recalling to consciousness are based upon delusion. Actual death cannot be determined from a cessation of the action of the heart, or of the pulse, or of the respiratory movements. Lowering of the vital heat to icy chilliness and even commencing putrefaction are no infallible proofs of death. Such symptoms are the delusions which have hurried so many unfortunates into an untimely grave.

At this point of his address, and as the moisture of terror began to trickle from the brows of his hearers, Dr. Rosenthal proclaimed victory over the grave.

To him and to his science, electricity, had been reserved the only real solution of the momentous problem, and to him belongs the honor of liberating mankind for now and all time from the possibility of—the greatest of evils—living interment. As an illustration of the validity of his pretensions, he cited the case of a woman to whom he had been recently summoned and who had been declared dead. No heart-beat was audible; no respiratory murmur perceptible; no pulse tangible. Only a *slight movement* of the abdominal walls betrayed the persistence of life. Electricity, warm covering, and coffee administered in drops resuscitated the flickering flame of life and rescued the woman from the grave. The *Wochenschrift* condemns the essay of Dr. Rosenthal as a sensational display worthy of the severest criticism of his colleagues. Dr. Rosenthal has recently been appointed a university professor, but one can hardly envy him the reputation he is likely to acquire by such deportment in his new position.

—Dr. Edward Seguin, of New York, calls the attention of the profession to the importance of bringing before the International Medical Congress a plan for procuring uniformity in methods, instruments, and records of observation. The feasibility of this plan might be considered in connection with the proposed adoption of the French metric system. It is suggested that the congress shall constitute national commissions similar to the one appointed in Paris recently, and that these commissions shall report at the next international meeting some practical means of carrying out this object. The great variety of standards at present employed by scientific men is undoubtedly a stumbling-block to the advancement of science, and such a system as is contemplated would be inferior only to the adoption of a universal scientific language.

—We regret to learn that Dr. Norton Folsom has resigned his position as Superintendent of the Massachusetts General Hospital. The four years that Dr. Folsom has held this position have been unusually important ones in the history of the hospital. Many changes have been inaugurated, and the number of patients has very largely increased, owing to the erection of the new pavilion wards. The smoothness with which the complicated system of a hospital has been worked during this transition period is an indication of the executive ability which Dr. Folsom has shown. Our readers will remember his valuable contribution to the work issued by the trustees of the Johns Hopkins Hospital. He will have the best wishes of his many friends in whatever new fields of labor he may be called to.

—In some parts of Russia, says *The Popular Science Monthly*, the young shoots of the “cat-tail” (*Typha latifolia*) are used as asparagus; they are said to be delicious. The plant grows abundantly in the United States in swampy localities.

—The diagnosis of the character of pleuritic effusions has always been one of difficulty, and often of conjecture. Recently, according to the *Medical Times and Gazette* of March 18, 1876, Professor Guido Baccelli, of Rome, has brought forward a new method of distinguishing between different kinds of pleuritic effusions, which promises to be a real addition to our diagnostic aids. Hitherto we have been able to say whether there was fluid in the pleura or not, but the question of its serous or purulent nature has had to be answered

by reference to a number of collateral circumstances, none of which by itself was conclusive, and which might even fail collectively. We have decided that there was an empyema present when an effusion has remained long unabsorbed, while at the same time the fever kept up, and the patient gradually lost flesh and strength, and perhaps suffered from œdema of the extremities. The new method is founded on a physical law, namely, that the vibrations of sound in liquids are transmitted *inversely* to their density. In a serous fluid, therefore, the sound passes more readily than in a purulent; and it is found that, whereas the whispered voice can be heard clearly, accompanied with bronchial respiration, at the base of a *serous* effusion, the spoken voice is not transmitted nor bronchial breathing heard over a purulent exudation. To use the method accurately the ear of the auscultator which is not applied to the chest must be withdrawn from all external sounds by closure with the finger, and the other ear must be firmly pressed naked against the chest, unassisted by the stethoscope. The patient must be placed in such a position that when he speaks the bundle of oral vibrations shall issue in a direction diametrically opposed to the ear of the listener. This condition is attained, supposing the right lung is being auscultated behind, by turning the patient's head so much to the left that, by drawing an imaginary line from his mouth to the point in the thorax where the ear is applied, it passes diagonally downwards through the centre of the effusion. Besides distinguishing between a simple serous effusion and one of a purulent character, this method enables us to detect the existence of a mixed effusion, that is, of a serous exudation in which flakes of fibrine and a moderate amount of leucocytes are contained, since the latter, by their subsidence to the lower part of the thorax, prevent the passage of the whispered voice over the area which they occupy.

— During the week ending February 19th ult., one hundred and thirty deaths were referred to whooping-cough in London. Of the decedents, forty-five were infants under one year of age. The registrar-general reports that so large a number of deaths from this disease has not been witnessed in the metropolis in any previous week so far back as 1840.

— M. Jousset de Bellesme has recently presented to the Société de Biologie a new poison extracted from the insect powder, the *Pyrethrum carneum*. He asserted that the toxical effect of this powder upon insects is not due to the mechanical obstruction of their stigmata, but to a crystallized substance, an alkaloid, obtained from it, specimens of which he exhibited to the society.

BOSTON CITY HOSPITAL.

SURGICAL CLINIC.

[SERVICE OF DR. THORNDIKE.]

Erectile Tumor of the Arm.—The patient, a boy ten years old, said the tumor had been growing six years. It was situated on the posterior and inner surface of the left arm, extending five inches upward from the internal condyle, and from the inner edge of the biceps round underneath the triceps behind. The growth was soft, doughy, compressible, painless, and deeply attached to the subjacent structures. The cutaneous veins were moderately enlarged, but the skin was not involved in the disease. There was no thrill nor pulsation in the tumor. The axillary glands were not enlarged. The motions of the elbow-joint were unimpaired, and the fore-arm and hand were in their natural state. Two ounces of blood were drawn from the tumor by the aspirator, but the size was soon as large as ever.

March 3, 1876. The boy was etherized, and Esmarch's bandage and tubing applied to the arm. Dr. Thorndike then made a vertical incision five or six inches in length over the tumor, and after dividing the skin and fascia came upon a dark-colored, lobulated mass of erectile tissue. The anterior portion, including perhaps one half of the growth, was cleanly dissected from the surrounding tissues, but the deeper portion was so intimately blended with the neighboring structures that it was impossible to clear it with the knife without greatly interfering with the healthy parts. The tumor was accordingly strangulated by passing numerous deep ligatures through and through the base of the growth. The tissue of the tumor looked much like placental tissue, and was partially encapsuled. None of the growth was removed, but the wound was tightly packed with sponges wet in ferric alum, and a firm bandage applied to the arm from the fingers upward. The rubber tubing was then removed, having controlled the hæmorrhage perfectly.

The patient was etherized every day for thirteen days, and the dressing renewed. An elastic tourniquet was always used at these dressings, and there was never any hæmorrhage throughout the entire treatment of the case.

Three weeks after the operation there was a healthy, granulating wound, with no appearance of the former disease. There had been no complication, and recovery promised to be speedy and complete.

There are several methods of treating these erectile tumors, the choice of which must largely depend on the nature, extent, and location of the disease. Not infrequently the superficial growths disappear without any treatment. But while present they are a continual source of anxiety, not only on account of their liability to grow, but also from the fact they may become the seat of malignant disease. Hence if there be any signs of the disease increasing in extent, an effort should be made to remove it, providing it can be done without running too much risk.

The smaller growths and patches are best removed by the knife, galvanocautery, or caustic. The first is speedy, certain, and at every one's command.

The more extensive cases may be treated by the cautery or caustic, or, if there are large outgrowths or tumors, by the ligature. In subcutaneous cases, where the skin is not involved, the tumors should be dissected out if possible, or, as in the above case, they may be partially tied. The treatment by injection is neither quite safe nor certain, and that by vaccination is seldom satisfactory, even in the slightest cases, the only ones in which it is applicable.

Lastly, there are those formidable cases of erectile tumors which require the utmost surgical skill and boldness to manage successfully. One of the most remarkable cases on record is that of a man in whom Dr. J. Mason Warren tied both carotid arteries and removed a large piece of the lower lip for an enormous erectile growth of the mouth, face, and neck. The patient recovered, and was greatly benefited by the operation. These cases usually require a variety of operations by the ligature, caustics, knife, etc., and are apt to require several repetitions before a favorable result is reached.

Traumatic Stricture of the Urethra. — Mr. M., aged fifty-eight years, received a gun-shot wound of the penis eleven years ago, which necessitated amputation of about one half of the organ. It healed readily, and to prevent too much contraction of the orifice of the urethra he wore an ivory plug, about an inch in length, for a long time. The irritation of the inner extremity of this dilator has produced a stricture one inch from the orifice. It admitted only a small probe when he entered the hospital. The stricture was gradually dilated until he could pass a fair stream of urine instead of passing it in drops, as he did when treatment was begun. He was ordered by Dr. Thorndike to keep the urethra dilated by occasionally passing an elastic bougie during the remainder of his life.

GEORGE W. GAY, M. D.

LETTER FROM NEW YORK.

MESSRS. EDITORS, — The commencement season at the medical schools has passed, and three hundred and eighty-five students have received the degree of doctor of medicine. The University Medical College held its thirty-fifth annual commencement exercises on the 15th of February, and graduated one hundred and thirty students. Bellevue Hospital Medical College held its fifteenth annual commencement on the same day, and gave diplomas to one hundred and fifty-nine of its students, while the College of Physicians and Surgeons gave diplomas to ninety-three on the 1st of March, being the sixty-ninth annual commencement of that institution. Bellevue and the Twenty-Third Street school graduated fewer men this year than last, while the university sent out more. Last year Bellevue graduated one hundred and ninety-eight, the College of Physicians and Surgeons one hundred and eight, the university only ninety-five, making a total of three hundred and ninety-eight against three hundred and eighty-five this year. It will be noticed that the university shows a marked increase in the number of its graduates this year over last, which can be accounted for only by the better accommodations provided for students in its new college building.

Within the past month the Society of the New York Hospital has been presented with the property at West Point on the Hudson so well known as Coz-

zens' Hotel, to be used as a convalescent hospital. Nominally, it is for the use of all the hospitals in the city, but practically, unless the terms of the gift are changed, its usefulness will be limited, as only those institutions which contribute to its support can send patients there. There are but few hospitals in the city whose income exceeds, or even equals, their expenditures, while one hospital, by the terms of its endowment, cannot use its funds for hospital purposes outside of the city, and one institution has a convalescent home of its own; I refer to St. John'sland, on Long Island, connected with St. Luke's Hospital.

The building at West Point will now accommodate about five hundred persons. It will probably be an expensive institution to manage for the time it can be made use of. It cannot be opened before the first of June, and it would have to be closed by the middle of October or the first of November; this would necessitate the reorganization of the hospital every year, which will be attended with considerable expense. There is a dislike among hospital patients to be transferred from one institution to another; if they are able to go out they prefer to go among their friends. This fact was well illustrated to me in a conversation with a gentleman at the head of one of the best hospitals in this city. Last summer, the trustees of a charitable institution in the country offered to take a few convalescing patients from the hospital for a few months, and although there were quite a number in a condition to accept of such an offer, yet they all refused, preferring, if they had to leave, to go among their friends. There is a class, however, to whom such a place, where they could go for a few weeks during the hot weather, would be of incalculable benefit. I refer to those who frequent the dispensaries. If those physicians who are connected with these institutions were able to send some of the many overworked, under-fed poor who live crowded together in tenement-houses to such a place in the country for a few weeks, much real good could be done. But it is too early to know just what the board will do, and it remains to be seen whether it can make the convalescing hospital work so as to fulfill the design of the donor.

The resignation of the "lady directress" has removed one great element of disturbance from the Presbyterian Hospital, and it is earnestly to be hoped that the experiment of giving a "lady" absolute power over the medical board in the management of a hospital is a thing of the past; it does not seem to have proved a *perfect* success. And now that the excitement has quieted down, it may be asked, What has been gained by either party in this controversy? The profession has not been able to carry its point. It is true that there has been a set of resolutions passed by the more respectable portion of the profession, the spirit of which must commend it to every fair-minded person. There have been many hard things said, and here the matter has ended. The amount of influence the resolutions have had may be judged from the fact that within *three weeks* one of the vice-presidents of the mass meeting accepted a position as one of the attending surgeons to the Presbyterian Hospital. It is true that many declined to accept any position under the board of that hospital, but the board of managers have been able to fill up the staff. The old story of the monkey and the chestnuts has been well illustrated by the action of some members of the medical profession in the city.

As to the board of trustees, it has so far carried its point that it has been able, after three months, to fill up the attending staff of the hospital, but it has lost the respect both of the better part of the profession and of a large portion of the laity; it has forced many of the best members of the board to resign, and has succeeded in crippling the institution over which it has control, in regard to both its means and its usefulness, by a course that resulted in advantage to no one.

The following table, compiled from The Hand-Book of the Benevolent Institutions and Charities of New York for 1876, I have thought might not prove entirely devoid of interest to the readers of the JOURNAL.

	When Opened.	Number of Beds.	Number of Patients Treated for the last Year	Expense.	Income.
Bellevue Hospital ¹	1826	1,000	6,218	\$141,456	.....
Charity Hospital ¹ .....	.....	1,000	9,328	121,566	.....
Nursery Hospital ¹ .....	.....	268	.....	34,267	.....
State Emigrant Hospital ² .....	.....	1,000	6,745	100,163	.....
German Hospital	1869	84	551	41,888	39,113
Presbyterian Hospital	1872	48	323	31,819	27,457
Roosevelt Hospital	1871	180	1,559	74,446	.....
St. Luke's Hospital (P. E.)	1858	185	1,054	60,000	43,000
St. Elizabeth's Hospital (R. C.)	1870	65	310	6,900	5,200
St. Vincent's Hospital (R. C.)	1857	150	897	23,110	37,059
St. Francis' Hospital (R. C.)	1866	250	1,735	.....	.....
Mount Sinai Hospital (Jews)	1852	150	1,144	46,849	27,597
Nursery and Child's Hospital	1854	750	...	104,692	110,322
Woman's State Hospital	1857	68	350	36,634	82,063
St. Mary's Hospital for Children (P. E.)	1870	26	96	6,100	.....
Hospital for Relief of Ruptured and Crippled	1863	200	4,624	41,174	38,174
New York Eye and Ear Infirmary ..	1822	....	10,485	23,612	28,011
New York Aural and Ophthalmic In- stitute	1869	....	4,116	19,539	19,539
Manhattan Eye and Ear Hospital ..	1869	....	3,183	9,240	9,332

From the above it will be seen that the hospitals in New York have accommodations for over five thousand seven hundred patients. Other institutions, not classed as hospitals, have at least five hundred more beds, making a total of about six thousand beds. The expense of conducting these institutions cannot be far from nine hundred thousand dollars. The number of persons who received hospital relief in 1875 may be estimated at thirty-five thousand at least. Besides, there were treated at the different dispensaries in 1875 one hundred and eighty-four thousand seven hundred and ninety patients, at an expense of not less than sixty thousand dollars. The three eye and ear infirmaries treat, besides the above, seventeen thousand seven hundred and eighty-four patients, at an expense of about fifty-three thousand dollars; making the number of persons treated in hospitals, dispensaries, and infirmaries for 1875 not less than two hundred and thirty-eight thousand.

There is no doubt but that many of these were able to pay something for

¹ Under charge of the Commissioners of Charity and Correction.

² Under charge of the Commissioners of Emigration.

medical services, and in fact many hospital patients do pay from six to seven dollars a week for their board, but these make up the smallest class. It is to the eye and ear infirmaries that those who are abundantly able to pay go and are treated gratuitously more than at any other class of charitable institutions.

The new building of the New York Hospital is rapidly being completed, and in my next letter I hope to be able to give you some account of the building.

TRAUMATIC SEPARATION OF THE SYMPHYSIS PUBIS.

MESSRS. EDITORS,—Dr. Gay calls attention in his recent article to cases of traumatic separation of the symphysis pubis. The dislocation of this articulation was reported by M. Gallez (in *Gazette hebdomadaire*, March, 1876) so recently that it may be new to some of your readers, and I take the liberty of extracting the following.

A man aged thirty-five attempted to hurl a piece of iron weighing eighty kilogrammes (one hundred and sixty pounds); his left foot slipped, causing an active contraction of the abductor muscles. A tumor corresponding to the pubis was found lower than normal; the left spine of the pubis was a finger breadth below the right. The posterior border of the left articular surface was found in front of the anterior surface of the right ramus of the pubis. There was no ecchymosis, nor pain, nor disturbance of the bladder.

The termination of the case is not mentioned.

E. H. BRADFORD.

THE annual meeting of the Boston Medical Association will be held at 36 Temple Place on Monday, May 1st, at half past three P. M. The association will take action with regard to proposed changes in the fee-table: (1.) As regards charges to physicians not living in Boston. (2.) As regards fees in venereal cases.

CHARLES P. PUTNAM, *Secretary*.

OWING to an inadvertence on our part, the hearty indorsement of the elastic rubber water-bed which appeared in our issue of the 13th instant referred to an advertisement which did not appear. It will be found on another page of this number.

AT a meeting of the trustees of the City Hospital, held April 18th, Drs. Thomas Hall, Jr., and Edward J. Forster were elected physicians to out-patients.

BOOKS AND PAMPHLETS RECEIVED.—*Cyclopædia of the Practice of Medicine*. By H. von Ziemssen. Vol. IV. Diseases of the Respiratory Organs. American Edition. New York: William Wood & Co. 1876.

Specimen Fasciculus of a Catalogue of the National Medical Library, under the Direction of the Surgeon-General of the United States Army, at Washington, D. C. Washington: Government Printing Office. 1876.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY.—At the annual meeting, April 19, 1876, the following officers were elected:—

President, R. L. Hodgdon; *Vice-President*, A. C. Webber; *Secretary*, C. E. Vaughan; *Treasurer*, J. W. Willis; *Librarian*, E. R. Cutler; *Censors*, E. R. Cogswell, E. H. Stevens, W. P. Giddings, J. L. Hildreth, H. E. Marion; *Councillors*, M. Wyman, H. Holmes, W. W. Wellington, C. E. Vaughan, G. J. Townsend, H. P. Walcott, Horace Chapin, J. W. Willis, S. W. Driver, J. C. Harris, J. T. G. Nichols, L. R. Stone, E. J. Forster, B. F. D. Adams, R. L. Hodgdon, E. R. Cutler, O. E. Hunt; *Commissioner of Trials*, Alfred Hosmer; *Councillor to nominate State Society Officers*, H. P. Walcott; *Orator*, H. O. Marcy; *Substitute*, A. L. Norris.

CHARLES E. VAUGHAN, *Secretary*.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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ANALYSIS OF FIVE THOUSAND CASES OF SKIN DISEASE.¹

BY JAMES C. WHITE, M. D.,

Professor of Dermatology in Harvard University.

FOURTH PAPER.

Acne. — As already stated, it is mostly in connection with the affections of the sebaceous glands that the most notable difference between private and dispensary practice is observed. Regarding acne as one of their advanced stages, a comparison of its occurrence in the two classes of patients confirms the data there given. In the five thousand hospital cases it was observed three hundred and forty-eight times, whereas among the two thousand tabulated from my private case-book it occurs three hundred and sixty times. The cases comprise acne disseminata, acne rosacea, and non-parasitic sycosis, and present little of special interest. The accompanying table shows the distribution of the cases of simple acne according to sex and age.

Ages.		Males.	Females.	Total.
Between 10 and 15.....		—	10	10
“ 15 “ 20.....		32	94	126
“ 20 “ 25.....		30	59	89
“ 25 “ 30.....		11	14	25
“ 30 “ 35.....		10	13	23
“ 35 “ 40.....		3	8	11
“ 40 “ 45.....		4	12	16
“ 45 “ 50.....		3	8	11
“ 50 “ 60.....		7	2	9
“ 60 “ 70.....		1	1	2
		101	221	322

It will be seen that by far the larger part of the patients were between the ages of fifteen and twenty-five, and this proportion would be much larger if all the cases which began during this period were added to it, the ages given being those at which the patients presented themselves for treatment. In many it had already existed for years. The

¹ Continued from page 332.

youngest of them was thirteen years old. The apparent difference in frequency of occurrence between the sexes must not be regarded as an actual representation in this respect, because girls care so much more for their "complexion," and seek medical relief accordingly. Nothing was learned by inquiry or observation in the whole series of cases which would satisfactorily explain the occurrence of acne. It was associated with disturbances of the digestive and sexual systems in a small proportion of cases, but just these disturbances are among the most common ills of the period of life in which acne most frequently occurs, and yet are only exceptionally accompanied by the latter. That the cutaneous affection is often aggravated by such internal disorders is, without doubt, true.

The few cases of impetigo (nineteen) and ecthyma (fifty-five) here recorded need but a word of explanation. The names do not necessarily signify distinct individuality of the affections included under them, but certain conditions of the skin due to a variety of causes, and closely allied to, or merely advanced stages of, eczematous inflammation. The distinction between them is largely one of degree; impetigo meaning the occurrence of small, discrete pustules without other accompanying forms of efflorescence, and not in the course of other cutaneous diseases, and ecthyma comprising the larger and deeper seated forms of efflorescence, such as occur in connection with, or as sequelæ of several affections of the skin accompanied by irritation, and in persons whose general condition is below the healthy standard. Groups of cases presented themselves in several instances which might, perhaps, be called impetigo contagiosa, if we were prepared to admit the existence of such an independent affection. They were remarkable, however, chiefly for occurring simultaneously in members of one family or of contiguous households, but individually were not strikingly peculiar. Similar cases at least, if occurring singly, would not attract especial attention. No element or certainty of contagion was discovered in connection with them.

Class V. *Hæmorrhages* (19 cases). The affections comprised under this class were cases of simple purpura. They were of a mild type, affected mostly the legs, and were rarely associated with apparent disturbance of the general economy; indeed, the presence of the attack was in several instances discovered only by accident. A feeling of slight weakness in the legs was the most prominent accompanying symptom. Several of the cases were chronic in course, outbreaks of the hæmorrhagic spots following each other either continuously or interruptedly for weeks and months. Unfortunately, they yielded no insight into the causes of this mysterious disease.

Class VI. *Hypertrophies* (40 cases). The hypertrophies of the cutaneous tissues are divided by Hebra into three groups, characterized

as follows: 1st, increase of pigment; 2d, thickening of the epidermal or horny layer with or without accompanying changes in the papillæ, called keratoses; and 3d, hypertrophies of the connective tissue. In Table II. the separation of the last two is not properly indicated, scleroderma and elephantiasis arabum belonging to the third group. The cases of pigment change included in the list, eighteen in number, were trivial in character, and consisted of an abnormal increase in amount of the colored cells of the rete distributed either in the form of small spots, lentigines; larger patches upon the face, chloasma (moth); or more extensive and more generally distributed stains upon the skin, melasma or negrities.

Among the keratoses, or affections of the epidermal structures of the integument and its appendages, the most interesting cases were five of ichthyosis and one of cornu cutaneum. Of the former, four were girls between the ages of four and nineteen; the other was a man, aged twenty-six. All had had the affection from earliest childhood. It was of a mild type, ichthyosis simplex, and of general distribution. In one of the cases only was there an approach to the form called ichthyosis hystrix, and in this only of partial distribution. All but one were in good general health.

Cornu cutaneum penis. — The case of cornu was a remarkable one, and deserves especial mention. The subject was a gentleman thirty-six years old, who at the age of twenty-two was circumcised for congenital phymosis. The surface of the glans and sulcus coronalis remained ever afterwards very sensitive, and there was an undue amount of seborrhœal secretion from the parts. In 1870 this secretion became still more excessive, and the parts gradually assumed the condition he presented at his first visit, in October, 1874. At that time the remnant of the foreskin, about a quarter of an inch in length, was converted into a thickened collar standing up perpendicularly to the body of the penis, and having a horny, cartilaginous feel. The exterior cuticular portion was red and scaly; its inner surface, the deep cavity of the sulcus, and the posterior half of the glans around their whole circumference, were uniformly covered with a thick, white, pasty coating. This material was soft in some parts like putty, in others, where exposed to the air, as hard as spermaceti, and could be dug out with a knife by the patient from behind the glans to a considerable depth without sensation. The only thing complained of by him was the inconvenience and annoyance of the affection. When pressed upon, "it hurt," he said, "just as any other foreign substance would in such a sensitive location." The formation of the material was stated to be quite rapid, "at the rate of one-hundredth of an inch in thickness per diem." From the parts exposed it sometimes cracked off when dry, but the material was everywhere kept down by the patient by frequent scraping with a knife. This

was the only treatment the disease had received. Some of the substance was examined by the microscope, and found to be composed of epithelial and sebaceous cells. Of the condition of the skin beneath the coating nothing could be learned, as it was completely concealed by it. The patient was directed to envelop the parts in a thick layer of diachylon ointment spread upon cloth by night, to apply sweet oil freely in the morning, then to wash them with soft soap, and to keep them covered by day with a cloth thickly spread with glycerin-plasma. A strong solution of tannin in glycerin was also to be painted on daily after the removal of the coating. . . . After a fortnight's treatment the patient wrote: "The results are very satisfactory so far. The ointment softens the layer, and the oil and soap aid the process so that after their use I can remove with my knife thin layers from the surface of the secretion by simple scraping, without cutting and without injury to the part, and I have thus removed more than nine tenths of it. On the removal of this dense, gristly mass the foreskin, which you saw curled up, and which could not be straightened, has now resumed its original form, flattening out into its natural shape. The whole layer is now so thin that it is no longer white, but flesh-color, from the color of the subjacent skin. The tannic acid now penetrates and causes in some places a certain amount of redness and congestion underneath. I am confident that the daily amount of secretion is much less."

I heard nothing further from the case for seven months, when the patient wrote that he had used the treatment four months and then had left it off to see what had been accomplished. The result, as stated, was that in a month the parts were again covered as thickly as before, and that they had also become quite sensitive and at times painful. The matter had collected to one fourth of an inch in thickness in some parts, and when removed was found to grow from closely-matted, fringe-like projections rising from the surface of the skin. In other parts the base was described as resembling a seed-wart. Where the disease bordered upon the true skin at the edge of the prepuce the growth was said to be as "hard as horn."

Six months afterwards, when he came for further advice, a great change was found to have taken place in the affection; from its seat, as above described, had grown up a remarkable horn. Its base occupied the inner surface of the remnant of the foreskin, the sulcus coronalis, and the adjacent half of the glans, narrowing in width gradually on the under side of the organ, and failing to meet and complete the ring only by the breadth of the frænum, which remained unaffected. In its widest portion for two thirds of its circumference the base measured three fourths of an inch. It had a uniform height of about half an inch, but in its central portion, corresponding to the median line of the dorsum penis, the growth presented a marked prominence or peak

more than three fourths of an inch in height. Its greatest diameter laterally was an inch and a half, while from the dorsum to the frænum it measured an inch and an eighth. Viewed from above it resembled the vertebral axis in shape more than any other familiar object of comparison, the central opening occupied by the free surface of the glans corresponding to the cavity for the spinal cord. Its perpendicular surface was marked by parallel upright striæ and ridges, resembling coarse nail-tissue, while its broad, plane tip offered a transverse section view of its lamellar or fibrous structure. Its color was yellowish-white. The exterior surface was very firm and horn-like, but the central portions were comparatively soft and waxy in consistence.

Excision of the horn was advised, and the operation was performed by Prof. H. J. Bigelow. The growth was dissected away entire with the scalpel and scissors, and the mucous membranes of the foreskin and glans were brought together by sutures, as in the operation for phymosis. Some little hæmorrhage followed, and the wound healed well. Examined by the microscope after removal, the outer surface was seen to be composed of epithelial cells compressed into compact fibrillæ or longitudinal bundles, which on cross section appeared to be arranged somewhat concentrically. The cells which made up the inner portion were far less compactly or systematically arranged, and numerous small, empty interspaces were visible between them. At the junction of its periphery with the skin, the epithelial cells of the horn were seen to be continuous with those of the mucous layer of the epidermis, and the papillæ were found to be greatly elongated and running up into the growth. No examination of the dermal tissues underlying the central portions, the sulcus, was made, so that the relations of the growth to the sebaceous glands of the part were undetermined. There would seem to be little doubt, however, as to the mode of development in this case. In consequence of the congenital phymosis the glands of the head of the penis had been stimulated into overactivity, and the retention of this secretion beneath the prepuce had caused an inflammatory action of its inner surface and of the opposing glans. After circumcision the parts remained still very sensitive and the secretion excessive. It is very probable that even then there may have been some papillomatous growth from the sulcus, as is so frequently the case after balanoposthitis from any cause, but at the time of his first visit nothing could be learned as to the condition of the tissues below the thick epidermal coating. At least after the subsequent removal of the latter by the means suggested at that time a closely-matted, fringe-like outgrowth was seen by the patient, which was undoubtedly hypertrophied papillæ. The rapid course from this period and the horny transformation of the cell-growth have been sufficiently explained above. We have here, then, all the elements essential to the formation of horns in accordance with the

theory of their development either from disorders of the sebaceous glands or from hypertrophied papillæ, the cells of the rete, of which they are composed, being deflected downwards to line the former or upwards to cover the latter. In the last semi-annual report on dermatology¹ will be found an account of a case very closely resembling this, by Professor Pick, of Prag, who gives two colored plates of the growth, which would serve equally well for ours, had the latter been allowed to grow a little longer. The history of the two horns, moreover, was very similar. Both affected individuals were below middle life, both had undergone circumcision for phymosis, and in both the growth was of very rapid formation. Dr. Pick in his article refers to ten other cases of horns upon the glans and foreskin. This one will make the twelfth, therefore, of this rare affection.

Under hypertrophy of the connective tissue there are placed four cases of scleroderma and five of elephantiasis arabum, diseases closely allied in their anatomical structures, but little similar in their ætiological relations. Of the former, three of the cases have already been reported at length;² the other may be briefly described here. The patient was an Irishman, fifty-one years old. In August, 1874, he was under treatment at the skin department for chronic papular eczema of the limbs, the legs being the parts principally affected, which disappeared in a few weeks. In October, 1875, he came again, stating that his hands had been getting hard for a year. The integument of the whole hands was found to be very firm, and the fingers were of a stony hardness, semiflexed, and immovable in their farther joints. The hands looked dried up and horn-like. The pigment and glandular structures were apparently unaffected. Elsewhere upon the body the integument was then in a normal condition, and the general health was unaffected. The local sclerosis was probably in no way connected with the more general eczema which preceded it.

Three of the cases of elephantiasis arabum, or pachydermia, deserve some notice. The first is especially interesting as an illustration of that variety which is associated with and apparently caused directly by periodical attacks of erysipelatous inflammation of the cutaneous tissues and the ensuing œdema. The patient was a girl, aged twenty-three, who for nine years had had recurrent erysipelatous inflammation of the right hand and fore-arm at irregular intervals of few or many months. The acute stage was generally of short duration and accompanied by nausea, headache, and fever. Desquamation followed, and the parts were left swollen for a considerable time, the duration of the œdema increasing with each such successive attack. When seen, the integ-

¹ The JOURNAL, December 9, 1875, from Vierteljahresschrift für Dermatologie und Syphilis, 1875, page 315.

² Archives of Dermatology, New York, July, 1875.

ument of the right hand and lower fore-arm was moderately thickened and firm, but presented no unusual surface-changes. No cause for the frequent attacks of dermatitis could be discovered. The second case was an Irishwoman fifty-six years old. For six years her right leg had been gradually enlarging from the knee downwards, without apparent cause or any positive symptoms, local or general. For a year before her visit the skin of the part had become eczematous, chiefly through scratching, and it was this symptom which brought her to the hospital for relief. The skin of the lower two thirds of the leg was greatly thickened, so that the part was about one half as large again as the corresponding portion of the other. Just above the ankle there was quite a deep sulcus. The eczematous condition, which so often accompanies the affection, was in the rubrum stage, and was secondary to the deeper tissue changes. The case deserves notice principally for the entire absence of previous inflammatory processes within or beneath the integument, or other of the usual exciting causes of the affection. The third case to be mentioned was an erect and stoutly-built American woman, five feet eleven inches in height. She was born in Vermont, and is forty-eight years old. In early life she had some "humor," and afterwards "salt rheum" until puberty, at the age of sixteen, when it disappeared. Twenty-five years ago, when twenty-three years old, she sprained her left ankle, and dates her trouble back to that event. The part never became quite strong again, and some months afterwards it began to be red and swollen, and itched greatly. It was much scratched, but there was no breaking of the skin or ulceration, although the veins became varicose from the knee downwards. From this period the leg constantly increased in size, although very gradually, the surface-changes in the skin never wholly disappearing.

At twenty-six she was married, and has given birth to three healthy children. She never had milk-leg or other puerperal process. Nineteen years ago she could wear, by stretching, an ordinary stocking, but four years afterwards she was obliged to have a special last made for her foot. Its greatest increase in size, fully one half, has been gained during the past ten years. Sixteen years ago she for the first time had a chill, followed by feverish reaction, but without any especial local symptoms. Since then these attacks have been numerous, several each year, accompanied or preceded by pain extending from the sole of the affected extremity to the hip. Red streaks are seen running up the leg, but there is no pain produced by deep pressure or impeded motion in the limb at such times. Nausea has been a constant accompaniment of the attacks, which last about forty-eight hours. There have been three so-called abscesses in different parts of the leg below the knee, discharging, when opened, one half a cup of clear, colorless, thin fluid, and continuing to run for some time afterwards (lymphorrhœa). At other times a similar

fluid has oozed from the deep fissures in parts of the skin. She never feels so well generally when the parts are leaking in this way. Seven years ago a chronic ulcerative process of the skin began on the right wrist and left elbow, which lasted many months, and left scrofulous-looking scars and some still prominent and red tubercles there.

When first seen, four years ago, her condition was recorded as follows: Patient manages this enormous limb with comparative ease and little suffering. She is able to walk quite long distances, and does her general housework with little fatigue. The catamenia have not yet ceased, and her general health is good enough.

The left thigh just above the knee-joint is somewhat fuller than the corresponding portion of the right, but the patella is easily felt. Below the knee the limb bulges abruptly to an immense mass, and continues of about the same size nearly down to the ankle. The foot is also much enlarged, and the skin covering the dorsal surface of the toes is very thick. Half-way down the calf the mass is divided by a very deep sulcus. To the feel it is brawny and resisting, not pitting easily on pressure. The surface of the skin covering the upper portion of the leg is coarse in texture, the hair follicles being widely separated, and largely occupied by eczematous fissures. Over the lower third and upon the dorsum of the foot the skin is largely covered by thick collections of discolored epidermal scales, separated in parts by deep fissures or sulci. In a few places the elongated papillæ, capped by brown epidermal tips, stand out individually or in slender groups, forming a sort of shag. All parts of the leg are at times affected by eczema, and itch extremely.

The dimensions of the two legs are —

	Left.	Right.
Three inches above patella.....	22 inches.	22 inches.
Around patella.....	22 "	19 "
Middle of calf.....	29 "	17 "
Below sulcus.....	28½ "	
Just above ankle.....	20½ "	12 "
Between folds at ankle.....	16½ "	
Over dorsum of foot.....	14 "	9 "

The patient weighs two hundred and twenty-five pounds.

Since 1872 there has been but little change in her condition. The leg certainly has not gained in size, and the eczema has been kept under by the applications used. There have been no fresh attacks of inflammation of the lymphatics or discharge of lymph from the part. The patient weighs at the present time two hundred and fifty pounds.

Class VII. *Atrophies* (37 cases). The instances of atrophy, although mostly of the rarer forms of cutaneous disease, were not of themselves remarkable. The case of leucoderma was simple and partial, the skin of the parts affected being unchanged, except in the loss of the pigment-cells. The maculæ atrophicæ occurred in a man to a very marked degree, being seated upon the thighs and hips. They were of an

elongated, oval form mostly, and of a glistening, bluish-white color. No cause of their formation was apparent. Of the cases of atrophy of the hair, so called, eleven were due to preceding seborrhœa of the scalp, alopecia furfuracea, the most common form of baldness. The others, nineteen, were cases of alopecia areata, and are placed in this class in conformity with Hebra's arrangement. It is not my intention to discuss here the vexed question of the pathology of this affection; but that it is of a mixed character, or, in other words, that there are specific clinical differences in the cases, and that a parasitic element may be observed in some and not in others, are conclusions I have drawn from both hospital and private practice. Several of the cases were of many years' duration, and in these the scalp, eyebrows, and eyelids were almost wholly denuded of hair. In five instances some other member of the family was affected in the same way.

Class VIII. *Benign New Growths* (82 cases).¹ The eleven cases of keloid varied in extent from the single outgrowth of the size of a pea upon some to several elevated patches as large as the hand upon others. It is difficult in some cases to discriminate between true spontaneous keloid and the false or hypertrophied scars. In some instances I think there can be no doubt that unmistakable cases of the former have their origin in minute scar formations, perhaps the inconspicuous seats of former acne pustules. With one case of pronounced keloid atrophy of pigment in the surrounding skin was associated, of the same form as in Wilson's morphœa. Two of the most extensive cases were in negroes. One of the two cases of molluscum fibrosum was that described by Dr. Wigglesworth in the April number of the *Archives of Dermatology and Syphilis*; the other was of a trivial character.

Lupus vulgaris occurred but eleven times. This appears to be a remarkably small percentage, but true lupus in my experience is a very rare disease in New England compared with its prevalence in Europe. The name as here used does not of course mean that heterogeneous mixture of affections which makes up the lupus of many surgical works and hospital reports, and which includes nearly every form of chronic ulcerative and crusting disease upon the face. Lupus erythematosus was relatively more common. The twenty-seven cases of so-called scrofuloderma represent a great variety of processes affecting the cutaneous tissues of persons exhibiting signs of that general condition recognized as scrofulous or strumous. This group may be regarded as a convenient temporary receptacle for a class of affections which cannot well be placed elsewhere, but which closer analysis will no doubt enable us to distribute more appropriately in the future.

(To be concluded.)

¹ The number of cases included in this class is wrongly given in Table II., the affections enumerated in the first line of the text under Class XI. (lupus and scrofuloderma) belonging here.

A CASE OF LARGE AMOUNT OF LIQUOR AMNII.

BY JOHN H. GOODELL, M. D., OF MARSEILLES, ILL.

I WAS called, February 26th, at six P. M., to Mrs. M., five months advanced in her ninth pregnancy. She was a thin, spare woman, about thirty-five years of age. She had never had any trouble with her previous gestations, but since her last conception she had been ailing all the time. In January last she had been quite sick, and unable to be about the house since then. Half an hour before my arrival, while she was sitting by the window, she felt something give away and immediately fainted. She was carried into an adjoining room to her bed, leaving a large pool of water where she had fallen. She was conscious when I came. She told me that she was larger before the accident than she had ever been at term. I found her weak, pulse 100, small. The bed upon which she was lying was completely saturated with water, dripping also from some dependent under part into a vessel which was one third full. The floor was nearly covered with water. The uterus seemed as large as it would have been at four months, and contracted fairly upon its contents. Digital examination revealed a foetus at the ostium vaginae, and I found the head of another just outside the os uteri. By careful manipulation the second one was delivered without very much hæmorrhage. During the time occupied in delivery the patient had fainted so many times that I began giving her brandy, in a measure relieving her. I made several fruitless attempts to get away the placenta. She seemed to fail so rapidly that I sent for Dr. J. Montgomery. We determined to continue the brandy and ergot, of which I had already given two doses, and, as her residence was in a locality predisposed to septic influences, we thought the placenta should come away. It was accordingly removed with very little loss of blood. Frictions of mustard to the extremities had been kept up for some time, but to no purpose. Ears of corn, dropped into boiling water for a few moments, and rolled in cloths, were then placed between her legs and up the sides of the body as far as the axillæ. The uterus contracted well under the stimulus of the ergot, but the pulse continued small, despite the artificial heat. She was evidently sinking, so I gave brandy subcutaneously, putting most of it under the skin of the body. Our efforts were fruitless. She died at 9.45 P. M., about four hours from the time she fainted at the window. I questioned her husband and daughter with regard to any accident or fall or anything of the kind that might throw light upon the case, but they said there was nothing of that description that they could remember during the pregnancy, to which the unfortunate termination could be attributed. The amniotic fluid was estimated at six quarts. My impressions are that that is a low estimate; the hæmorrhage was not over twelve ounces. My

views of the case are as follows: The double fœtus required twice the ordinary amount of exertion of the uterus, which weakened it. When the fœtal development went beyond the point of uterine tolerance, the membranes broke, the shock and comparatively slight hæmorrhage proving fatal.

CASE OF ACUTE RHEUMATISM TREATED WITH SALICYLIC ACID.

BY IRVING W. SMITH, M. D., CHARLES CITY, IOWA.

JANUARY 20th, Gertie C., a delicate child of eleven years, first noticed slight pain and swelling of one ankle, which increased so as to confine her to bed on the following day.

February 2d. On this day she was first seen by the physician. Several joints were now affected, the back was painful, and any motion unbearable. Erythema nodosum appeared on the arms and legs. The patient was put upon the ordinary alkaline treatment, with Dover's powder to relieve pain at night, and at the end of a week was so much improved that medical attendance was discontinued.

February 29th. The physician was again called. For the last three or four days and nights she had suffered constantly from severe pain, crying out continually. She was now ordered salicylic acid, five grains to be taken in a wafer every hour.

March 1st. Free from all pain. She became so in about twelve hours after beginning the remedy, having taken some forty grains. The acid was continued till seventy grains were taken, within something less than twenty-four hours. The effects observed were profuse perspiration, the head at one time a little "whirly," no appreciable disturbance of the stomach. The result seemed magical.

After about a week slight pains returned. Ten five-grain powders were administered, with the same gratifying result as before.

April 1st. There has been no further relapse; the girl is now in excellent health; her mother says she "never felt better in her life."

RECENT PROGRESS IN OPHTHALMOLOGY.

BY O. F. WADSWORTH, M. D.

Anatomy of the Lachrymal Canaliculi. — Heinlein¹ examined these canals on horizontal and frontal sections through children's heads after the lime had been removed from the bones by acids. He divides the canaliculus into five parts: punctum lachrymalis, vertical portion, curved portion, horizontal portion, and the conjoined canal with the opening into the sac. The punctum lachrymalis opens into a vertical

¹ Archiv für Ophthalmologie, xxi. 3.

portion of the canal which has the form of a funnel, its smaller end directed toward the punctum. This is the shortest portion of the canal, having a length of .5 mm. and a width at its widest part of .4 mm. From the base of this funnel the canal makes a curve for a short distance and then assumes a nearly horizontal course, being directed slightly upward in the lower, downward in the upper lid. Near the lachrymal sac the canaliculi unite and thus enter the sac. On the convex side of the curved portion of the canal are two shallow, wide-mouthed diverticula, the first, nearer the funnel, directed laterally, the second and larger directed downward in the lower, upward in the upper lid. The width of the canal is about doubled by the diverticula, and it is to their presence, Heinlein believes, that the appearance of spiral windings in Hyrtl's¹ corrosion-preparations of the canaliculi is due. He was unable to observe any trace of spirals, nor did the sections show any sign of valve-like folds of mucous membrane in the course of the canaliculi, as described by some authors. Whether such a valve exists at the entrance of the lachrymal sac seemed more doubtful. On all sections the mucous membrane of the sac showed folds projecting into its cavity, perhaps due to the influence of the means employed for hardening the preparations, but such folds were not confined to the neighborhood of the mouth of the canaliculus.

Heinlein denies the existence of such an arrangement of muscle-fibres about the canaliculus as to form a sphincter, even where Merkel² described them, just beneath the punctum. On the contrary, study of his sections inclines him strongly to the belief that muscular fibres are inserted into the wall of the canaliculus at that part in such a way as to dilate instead of contract its calibre.

Course of the Nerve-Fibres in the Chiasma. — At the last meeting of the Heidelberg Ophthalmological Society, Woinow³ showed a preparation which offered strong evidence in favor of only partial crossing of the optic nerves. It was from a woman who had lost the left eye at ten years of age, from variola, and died at fifty. The left optic nerve was atrophied, the right normal; both optic tracts were atrophied, the left to a much greater degree than the right. Woinow also stated that Adamük, on repetition of Gudden's⁴ experiments on dogs and cats, had obtained the same results, that is, after enucleation of one eye partial atrophy of both optic tracts.

In the discussion which followed Woinow's communication, Donders mentioned a similar preparation which had formerly been in his possession for a number of years. In a woman, dying at sixty, one eye had been atrophic from youth. There also the corresponding nerve was com-

¹ Corrosions Anatomie. Wien. 1873.

² Handbuch der Augenheilkunde (Graefe and Sarmisch), i. 1.

³ Monatsblätter für Augenheilkunde, page 424, 1875.

⁴ See Report on Ophthalmology, May, 1875, JOURNAL.

pletely atrophic, both tracts partially atrophied, that on the same side as the lost eye much more than the other.

Hirschberg¹ also related the case of a man who had right-sided hemiopia, the line of demarkation sharp and vertical, aphasia and right-sided hemiplegia. At the autopsy a tumor was found in the left side of the brain and a marked thinning of the left tractus. The theory of semi-decussation alone here explained the hemiopia.

Gudden² furnishes a second example of partial atrophy of both optic nerves in the dog, following atrophy, experimentally produced, of one optic tract. He further points out that, if there be total crossing of fibres in the chiasma, an antero-posterior section through its centre should give a surface about equal to that of transverse section of both tracts, while in fact it falls much short of this.

Tuberculosis of the Conjunctiva. — The occurrence of miliary tubercles in the choroid in connection with general, mostly acute miliary tuberculosis is frequent; in like connection tubercles have been found in the iris by Gradenigro, and in iris, ciliary body, and retina by Perls.³ Recent observations on local tuberculosis⁴ have shown that miliary tubercles may be formed in the eye, as in many other situations, without their presence elsewhere, or at least without an acute tuberculosis. To the cases of miliary tubercles in a granuloma of the iris and in a growth of the conjunctiva, reported by Koester,⁵ Walb⁶ adds a third. A boy, of tuberculous family, who had suffered from caries of the petrous bone followed by glandular enlargements of the neck, had, after measles, an inflammation of the right eye. Some weeks later, besides a chronic blenorrhœa of the conjunctiva of the lids, there was a growth of the upper equatorial part of the bulbar conjunctiva sufficient to displace the eye somewhat downward and inward. The anterior part of the growth was pale red, partly covered by epithelium, its surface slightly uneven. The posterior part was the seat of an ulcer with sharply-marked edges, its base formed by a yellowish-white crumbling mass. Here the sclera was destroyed, so that a probe passed easily into the interior of the eye. The lens was cataractous, but the cornea normal, and the anterior chamber of good depth. Soon after, a panophthalmitis gave rise to shrinking of the globe. Gradually flattening of the growth took place, the cheesy masses were thrown off from the ulcer and replaced by granulations, and small points of cheesy degeneration appeared in the rest of the tumor. A portion of the tumor was removed and its tissue found to be made up of small, round cells with numerous vessels, in the midst of which were scattered nodules having all the histological characteristics of miliary tubercles.

¹ Reported at length in Virchow's Archiv, Band 65.

² Archiv für Ophthalmologie, xxi. 3.

³ See Report on Ophthalmology, JOURNAL, November, 1873.

⁴ See Report on Pathology, JOURNAL, April, 1874.

⁵ Centralblatt, 1873.

⁶ Monatsblätter für Augenheilkunde, July, 1875.

Considering the great preponderance of granulation-tissue in the tumor, it is probable that first a chronic inflammatory hypertrophy occurred, followed by the development of tubercles and partial secondary cheesy degeneration.

As tuberculosis of the conjunctiva, Hock¹ also reports two cases, one of which, that of a child of two years, who soon died of meningitis, bears a strong resemblance to Walb's case. In the other case, that of a man with pulmonary phthisis, there was an irregular ulcer, with uneven edge and yellowish base, at the upper edge of the tarsus of the upper lid.

New Operation for Symblepharon. — At a meeting of the Clinical Society of London, Dr. Taylor² showed a patient on whom he has operated for symblepharon by a new method. After the adherent lid has been separated from the eyeball, a thin piece of skin is dissected up from the lid, and being passed through an opening in the tarsus, its raw surface is fixed in contact with the raw surface of the inner side of the lid or of the globe. Reunion of the lid and eyeball is thus prevented. The transplanted skin is at first nourished through its base, but this is divided so soon as the skin has become attached in its new position. Thus situated the skin is said to assume the functions of a mucous membrane.

Treatment of Separation of the Retina. — The want of success which has attended the treatment of separation of the retina by derivatives and local depletion, or by puncture of the membrane through the sclera, has led most oculists to abandon all special treatment or to keep the patient quiet on his back for some time. Samelsohn³ proposes, in addition to the latter expedient, the employment of a pressure-bandage on the affected eye. He holds that two factors are active in keeping the retina in position: the pressure of the intra-ocular contents and the elasticity of the sclera. So long as these are pretty well balanced the retina will remain in place, and an elastic sclera may even compensate for a rather sudden evacuation of a portion of the intra-ocular fluid. But when the sclera has lost its elasticity, sudden diminution of intra-ocular tension may cause separation. Loss of elasticity is due to tissue-changes, is gradual, progressive, and permanent; diminution of intra-ocular pressure appears to be often only a temporary condition. The indication, therefore, is to preserve the tension at the proper height artificially till the proper amount of intra-ocular fluid is resecreted. Pressure of the bandage is to make up for the want of elasticity in the sclera. Samelsohn has not found the objection that increased external pressure would tend still further to lessen the amount of fluid contents

¹ Monatsblätter für Augenheilkunde, September, 1875.

² British Medical Journal, February 5, 1876.

³ Centralblatt, 1875, page 833.

of the eye justified in practice. The bandage should be renewed twice daily and continued three or four weeks; earlier suspension of the treatment may be followed by the loss of any improvement already obtained. During the whole time the patient lies quietly on his back. There is no objection to careful testing of the function of the eye at the time of renewal of the bandage. The first sign of the effect of the treatment is episcleral congestion and ciliary neuralgia, accompanying which there is usually already improvement in amount of vision and size of field. Samelsohn asserts that he has found this method more successful than simple dorsal decubitus, and in the twelve cases in which he tried it obtained a good result in all fresh cases.

Blindness from Whooping-Cough. — Knapp¹ reports the case. A boy, three years old, had suffered from whooping-cough six weeks; was emaciated and excitable. For two days the parents had observed loss of sight, and he had complained of darkness, though his condition otherwise had not changed. Knapp found no abnormality externally, and the pupils responded to light, but the boy could not even tell the direction of the window. With the ophthalmoscope marked retinal ischæmia was observed, the nerve-disks were white, the veins scant and thin, in one eye only the main branches of the arteries to be seen as fine threads, in the other no arteries visible. As no change was evident after twenty-four hours of nutritious diet and stimulants, paracentesis of the anterior chamber was performed, in order to diminish the intra-ocular pressure, and so favor the entrance of blood to the eye. The next day the retinal vessels were better filled and the optic disks less white; the boy could also point out the window. The condition of the retina and disks improved gradually, and the patient became able to recognize objects about him, but vision never reached the normal standard. The general disease did not improve, however, and death ensued, six weeks later, from lobular pneumonia.

Blindness from whooping-cough is very rare. Knapp quotes Professor Loomis to the effect that it has been observed almost exclusively in children who have died from lobular pneumonia, and as this was also the result in the present case, the symptom would appear to be a very grave one. The question as to the causation of ischæmia retinae generally is still undecided, and this case does not offer a solution. Knapp was inclined to refer the ischæmia to the general anæmia and weak action of the heart, or possibly to a hæmorrhagic effusion between the sheaths of the optic nerves. The latter supposition derives some support from the frequent occurrence of conjunctival hæmorrhages in whooping-cough. This frequency of conjunctival hæmorrhage would also lead us to infer intra-ocular hæmorrhages where disturbance of vision occurred, but in the case related nothing of the sort was observed. A point of interest

¹ Archives of Ophthalmology and Otology, iv, 3 and 4.

in the case is the good influence which seems to have been exerted by the paracentesis.

Myopia in Swiss Teachers. — Pflüger¹ made use of the opportunity afforded by the assemblage of five hundred and forty-six teachers, twenty to twenty-five years of age, at Lucerne, under the military laws of Switzerland, to investigate the refractive condition of their eyes. The results of his observations, though imperfect in some respects, are yet of considerable interest. He obtained data concerning five hundred and twenty-nine, partly by personal examination, partly from the records of the military commission intrusted with the examination of recruits. Most of the cantons were represented; three hundred and seventy-five were natives of German, one hundred and fifty-four of French Switzerland. At the first it was noticeable that a much larger proportion of the German (nine per cent.) than of the French (two per cent.) Swiss wore glasses, and examination of the refraction gave a similar but not so marked difference. Of the German Swiss 24.3 per cent., of the French Swiss 14.3 per cent., were myopic. It appeared also that the percentage of higher degrees of myopia was greater among the German than among the French Swiss myopes, but in both far the greater number had only a moderate degree of myopia. It is interesting that the average degree of myopia for the year of age (twenty to twenty-five) varied little, in four years was indeed the same (one twelfth), while the average for the men of the oldest year (twenty-five) was, contrary to what might have been expected, somewhat less (one fifteenth).

Pflüger propounds the question whether the different percentage of myopia among the German and French Swiss is due to peculiarity of race, to difference in length of study required, or to other cause. The second supposition is answered in the negative, inasmuch as the length of preparatory study required of the teachers was, generally, much the same. He thinks it of importance, however, that the candidates for positions as teachers in German Switzerland are for the most part educated in seminaries in which they live as well as receive instruction, while in French Switzerland they dwell in private houses. This corresponds also with the observations of Erismann, who found in the Russian schools ten per cent. more myopes among the internes than among the externes. Examination as to the hereditary character of the myopia was too imperfect to admit of definite expression of opinion, but many of the German Swiss myopes denied the existence of myopia in their families. Evidence of the necessity of care in selecting glasses is given by the fact that many of the men examined wore glasses stronger than their myopia required.

¹ Monatsblätter für Augenheilkunde, September, 1875.

ANIMAL PARASITES.¹

THE author of this work, well known as a helminthologist, seems to have endeavored to present all the possible phases of mutual relationship between animals of all ranks, from limited commensalism up to complete parasitism. In doing this he has brought together a vast number of such instances from all classes of the animal kingdom, which are curious at least, although of little importance to the general reader, but has failed, we think, to make just the kind of popular and yet scientific manual of the true parasites of man and the higher animals which is so much wanted, and which would have formed so valuable a contribution to this series of publications. The more distant relationships he discusses under the titles of free and fixed messmates, and mutualists, including associations as remote as those between the pilot fish and shark among the higher orders. Parasites he divides into those free during their whole life, as lice, fleas, bed-bugs, the itch-insect, etc.; those free while young, as the chigoe, ticks, and guinea-worm; those free when old, as ichneumons and æstri; those that migrate and undergo metamorphosis, the flat, encysted, and round worms of man for example; and lastly those which are parasites their whole life, of which no familiar instances can be cited.

Parasitism he shows to be almost universal, not only so far as individual hosts are concerned, but as to the organs and tissues affected; he is even inclined to believe it to be beneficial to the host, as the following extracts show: "The animal which possesses its ordinary parasites, far from being ill, is in a normal physiological condition. . . . The Abyssinians do not consider themselves in good health except when they nourish one or many tape-worms. . . . It is not a matter of doubt to us that parasites often play their allotted part in the economy; their absence as well as their presence may be the cause of inconvenience. We should not even be astonished if the administration of certain worms internally should be prescribed as a remedy. . . . No one can foresee all that science has a right to expect from the salutary effects of certain parasitical worms on the system. . . . Fleas may, perhaps, some day find a place in the chemist's shop as well as leeches. We see no reason why homœopathic bleedings should not be resorted to as well as homœopathic medicines; we should certainly have more confidence in the effects of the bites of fleas than in the efficacy of remedies subdivided into the millionth part of a grain." Such utilitarian views of the subject are certainly original. These statements may, perhaps, be regarded merely as examples of the exaggerated style of expression and fancy with which the book is filled, and which could well be spared. Surely it is out of keeping with the high objects of this series to search the literature of former centuries for fabulous tales which can only mislead the common reader. Michelet, in his imaginative works on natural history, and Victor Hugo, in his chapter on the devil-fish, have made us acquainted with a certain style of descriptive writing, but we had not expected to see it made use of in a "scientific" treatise on parasites.

¹ *Animal Parasites and Messmates*. By P. J. VAN BENEDEN, Professor at the University of Louvain, etc. The International Scientific Series. New York: D. Appleton & Co. 1876.

On the other hand, the author has brought together some valuable information in reference to the parasites of man and the higher animals which was not previously accessible to the general reader. The guinea-worm is announced as entering the human system inclosed in a little fresh-water crustacean found in drinking-water. The very complex metamorphoses of the trematode worms (flukes) is described at length; how complex the following paragraph will show: "We have before considered the embryo as mother and daughter coming into the world together; or the mother, daughter, and granddaughter are born together like twins; so that if the mother or the daughter meet with an accident during parturition, the granddaughter may be born before the mother and even before her grandmother."

The danger of feeding patients with minced raw beef, or its juices, is well exposed. "Scherlau, at Stettin, found *tania medio-canellata* in seven children who had been fed, on account of anæmia, with raw beef." The following instructive note upon the development of the broad tape-worm appears. "A very curious circumstance is the actual rarity of the *bothriocephalus* among the inhabitants of the shores of the Lake of Geneva, though formerly it was very common there. This diminution, if we may not call it disappearance, is due to the change which has been made in the construction of water-closets, all of which formerly emptied themselves into the lake, so that the embryos were hatched in the water, and persons were infested by them through drinking it. At present the refuse of the towns is carefully collected for the purpose of manuring the land."

The illustrations, eighty-three in number, are clear and well drawn, and the volume, like its predecessors, makes a handsome appearance in all respects.

THE INSANE HOSPITAL AT DANVERS.¹

THE commissioners report progress and ask for more money. The original appropriation of \$650,000 and the second appropriation of \$250,000 have been nearly expended, and \$600,000 more are asked for. This excess of cost over estimate is attributed partly to a larger amount of grading than was anticipated, to unexpected difficulties in arranging for a water supply with the town of Danvers, and to the addition of accommodations for a larger number of patients than was at first proposed. The plan originally contemplated provision for four hundred patients; this number has been increased to five hundred, and by using the attics six hundred can be provided for.

The writer recognizes the plans as old acquaintances, having devoted a month eleven years ago, with the present supervising architect, to drafting the original plans for the new city hospital for the insane that was *not* to be. After many revisions the perfected plans of the city were essentially adopted by the state commissioners, the same architects were employed, and Dr. Walker, of the Boston Lunatic Hospital, engaged as medical supervisor. Instead of the new city hospital on a hill at Winthrop, we are to have the same hospital on a hill in Danvers, equally bleak and more inaccessible. The only gain to

¹ *Report of the Commission upon the Erection of the New Hospital for the Insane at Danvers.* 1876.

Boston by this change of policy is in the fact that the State will pay about fifty-five per cent. of the cost of construction. The city now has over four hundred patients, and by 1877 or 1878, when the hospital is done, will have fifty more. We shall then see a state hospital nearly full of patients for which the city will pay board, having no direct control of its management. The four hundred and fifty Boston patients and their friends must go to Danvers to accommodate the fifty or more from Essex County. The heavy grading and the pumping of water from the Ipswich River might have been saved if the State had taken a site near the Cochituate or Mystic sources of supply.

Although this change of base was disappointing to many who felt that Boston should continue to have an insane hospital of her own, and who labored earnestly and thanklessly to bring it about, it will lead to a great improvement on the present state of things. The new hospital will be as complete and perfect in construction and appointments as it is possible to make it. As to expense, we can only say that the proper care of the insane necessarily involves great expense. No other plan is more economical than the present hospital system. The encouragement to multiply or enlarge such cheap institutions as the asylum for chronic insane at Tewksbury is not great. Perhaps a building for this class might be built at less cost than the Danvers hospital; but it must be remembered that the more demented and helpless the class of patients the more perfect are the appliances for heating, ventilation, and cleanliness required. An exclusively cottage system would be very expensive on account of the increase of roofs and walls for the same number, the reduplication of all kinds of apparatus, and the provision for additional supervision. Detached buildings for convalescents could, however, be added at Danvers, when circumstances require it, at a moderate expense. When this and the new hospital at Worcester are completed the State will be well equipped with four first-class hospitals for the insane.

T. W. F.

A MANUAL OF MIDWIFERY.¹

THIS manual by Dr. Roberts, one of the physicians to St. Mary's Hospital, in London, seems admirably adapted to enable the reader, without much trouble, to obtain a superficial knowledge of obstetrics. We have already expressed our opinion of the danger to be feared from the temptation which is constantly offered to students by the publication of these so-called *vade mecum*s. The author has done his work well, however, and the result is the production of a concise statement of the leading facts relating to obstetric practice, based upon the most recent theories which are now considered as reliable.

¹ *The Student's Guide to the Practice of Midwifery.* By D. LLOYD ROBERTS, M. D., M. R. C. P., Lond. Philadelphia: Lindsay and Blakiston. 1876.

MEDICAL TEXT-BOOKS.

ALTHOUGH medical literature of the present day has been marked by the great and increasing number of treatises on special subjects, the demand for comprehensive works on medicine and surgery in a condensed form seems by no means to diminish, if we may judge from the frequent appearance in new forms of our old friends, the medical text-books. The object of this kind of work is, we presume, to afford an effective and ready means to the student or general practitioner of acquiring a knowledge, it may be, of medicine, surgery, or obstetrics. No portion of any one of these various branches should be neglected, and each subject, although treated in as concise a form as possible, should keep pace with the advance of science. It is evident that the range of subjects, particularly in the department of medicine and surgery, must be an exceedingly wide one, covering a broader field than it is possible for one individual, even the most experienced, to become fully conversant with. The quality of different portions of such a work must, therefore, be of very varying degrees of excellence. The necessity for keeping each subject within bounds properly proportioned to the size of the volume must result in an absurdly inadequate treatment of many important subjects, so as to render them practically useless for the purposes of teaching.

It has been the fashion of late years to complain of the enormous increase of works on specialties, as they are called, and there is little doubt that this form of literary enterprise, in many instances, has been much overdone. The origin of this abuse can be traced largely to the work of those writers who have attempted to perpetuate a class of books which in a great measure fail to meet the demands of the time. Formerly, such treatises obtained an exceedingly wide circulation, and were to be found in the library of every practitioner and upon the desk of every student. It is a great temptation to write a book "which will sell well," and this species survives, not by virtue of its fitness, but from a quality which is supposed to adapt it to the wants of the greatest number of readers. It must be elementary enough for the student to understand, and sufficiently comprehensive to make it useful as a work of reference to the physician. The truth is, it fails to accomplish either of these purposes.

A great want of the day is books which are intended primarily for the use of students. This is particularly true of surgery. A text-book of general surgery modeled somewhat after the plan of Billroth's *Surgical Pathology* would, we think, fill an "aching void." The subject, a complicated one and at points exceedingly abstruse, should be treated as a narrative, the thread of which is never broken or lost sight of, leading the mind without undue effort on its part from one subject to another. Diagrams (and not poor portraits of complicated specimens) would serve to make clear points too difficult to be explained by the text alone. Too wide a range of subjects should be carefully avoided. Such a work would encourage the student to supplement his clinical studies by appropriate reading. The surgeon would then rely upon *systems* of surgery for reference, and "the books" would become less a by-word of reproach among practical men than they now are.

MEDICAL NOTES.

— It is with feelings of deep regret that we announce to our readers the death of the distinguished clinical teacher, Professor Traube, at Berlin, on the 11th of April, after a long and painful illness, in the fifty-ninth year of his age. The son of poor parents, Traube by his industry and zeal worked himself up to the highest rank in the profession. After studying in Breslau, Vienna, and Berlin, he graduated at the University of Berlin in 1840. Here in 1848 he became privatdocent, and in 1849, as Schönlein's assistant, he took charge of the newly created department for thoracic diseases, and in 1853 became director of the same.

As Traube was a Jew, it was not until long after he and his clinic had obtained a world-wide reputation that he was appointed professor in the university. In his death Germany loses one of her most able, industrious, and conscientious observers.

— As a convenient solvent for salicylic acid Dr. Painter recommends to the *Pacific Medical and Surgical Journal* the liquor ammoniæ acetatis. By it a solution is made which is not unpleasant to take, and the sweetish taste of the acid is quite perceptible. Dr. Painter suggests a formula containing two grains of the salicylic acid to the drachm of the liquor ammoniæ acetatis.

— *The Medical and Surgical Reporter*, of Philadelphia, has reached its one thousandth issue. It was originally started as the organ of the New Jersey State Medical Society, under the charge of Dr. Joseph Parrish. Dr. Butler was subsequently associated with him, and the journal was shortly afterwards changed from a quarterly into a weekly and removed to Philadelphia. Dr. Butler, in 1867, associated with himself the present editor, Dr. Brinton, under whose charge the journal remains at present.

— Our English exchanges give abstracts of a report recently made to the Obstetrical Society of London, by Jonathan Hutchinson, F. R. C. S., on certain causes of death in ewes, during and after parturition. The results of Mr. Hutchinson's investigations seemed to prove that the death of the fœtus before delivery was of much more serious consequence in sheep than in the human subject, and also that it was far from infrequent. The lamb, after death, appeared to become a cause of metritis, there being but little tendency to its expulsion. If metritis occurred it was apt to run a rapid course, gangrene frequently ensuing, during which rupture of the walls often took place. Peritonitis and pyæmia not infrequently occurred in connection with metritis. Puerperal metritis and peritonitis, or the consequent pyæmia, seemed to be invariably accidental, and not the result of contagion. They occurred in animals treated in the open air, and yet ran a course almost precisely similar to the parallel maladies in the human subject. Ewes during lactation, in consequence of the use of cotton cake, — an improper article of food, — seemed liable to a sort of idiopathic tetanus, but no such unfavorable results followed its use in lambs, hoggets, and undelivered ewes. Young lambs were liable, independently of any known source of contamination, to the occurrence of purulent phlebitis of the umbilical vein, with the consequent phenomena of pyæmia, a fact which gave strong support to what Mr. Hutchinson believed to be the true hypothesis of all pyæmia, strictly so called.

— For prurigo senilis the treatment recommended by Dr. W. K. Bowling is given in the *Nashville Journal of Medicine and Surgery*, April, 1876. It consists in sponging the parts affected by prurigo, night and morning, with the best cider vinegar, and after the vinegar has dried, smearing the surface with citrine ointment.

The same authority has published a remedy for the tenesmus of dysentery. It is to place a drachm of water of ammonia in the chamber vessel just before the patient sits upon it.

BOSTON CITY HOSPITAL.

MEDICAL CLINIC.

[SERVICE OF DR. HALL CURTIS.]

Hepatic Enlargement, with Blood-Cyst. — B. D. B., thirty-six years old, salesman, New Jersey, entered January 21, 1876, with the following history. Two years ago he had intermittent fever, lasting about two weeks. Four months ago he was attacked with very severe pain at the epigastrium, accompanied with vomiting and obstinate constipation. He was sick seven days. A fortnight after, he was again attacked in a similar manner, and was treated in a New York hospital for acute dyspepsia. He has since had constant pain in the left hypochondrium, and in the epigastric and umbilical regions, but most marked in the hypochondrium. This pain is not severe, excepting three or four times during the twenty-four hours, when it is intense and lasts about one hour. It is also induced by eating or fatigue. Pain is occasionally noticed in the left shoulder. He has always been accustomed to the daily use of alcoholic drinks, at times to excess.

At present his frame is slight, but he is sufficiently well nourished. His face is sallow and thin. Tongue slightly coated, but moist. The action of the heart is sluggish, but otherwise normal. Pulse is weak and compressible. The capillary circulation is also sluggish. Pressure on the skin leaves an impression like "la raie blanche scarlatineuse." Splenic dullness is increased. Patient states that he has lost flesh. He complains of constipation and dysuria. Examination of urine: color high; reaction strongly acid; specific gravity 1030; slight sediment; no albumen; no sugar. Pulse 72. Respiration 20. Temperature 100.4°.

During the rest of the month his condition remained unchanged. His pain was relieved and sleep obtained by ten-grain doses of Dover's powder. The constipation, which was obstinate, was relieved by enemata of soap, oil, and water night and morning.

February 3d. He complains more of pain in the epigastrium and of restlessness at night, with debility.

R \bar{y} Syrupi manganesi iodidi gtt. xx. every four hours.

February 6th. Still continues much the same.

R \bar{y} Elixir bismuthi, pepsin, et strychniæ 3 i. three times daily.

R \bar{y} Potassii bromidi gr. x. at night.

February 7th. Pain is still most severe in left hypochondrium. He complains of cough, with breast-pain. The lungs are normal. The abdomen is rather full, resonant throughout, with the exception of the left hypochondrium, which is dull and exceedingly tender. The heart-sounds are distant and feeble, but not abnormal. Pulse 84 and small. Appetite poor. Hop fomentations to hypochondrium at night. Omit bromide of potassium, and give

℞ Pulv. camphoræ,
Ext. hyoscyami āā gr. i.

M. et ft. pil. No. 1. Pro re nata.

February 16th. Very restless at night; persistent pain in left hypochondrium. Omit hop fomentations.

℞ Emplast. belladonnæ 6 × 8 over painful region.

Omit Dover's powder.

℞ Chloral hydrat. gr. xv.
Syrupi ʒi. M.

To be given every hour for three hours at night.

February 20th. The whole abdomen is now full and tender. The left hypochondrium, which was full and dull, is now resonant. The right hypochondrium is full and dull on percussion, evidently due to the increased size of the liver, the lower edge of which can be felt and is slightly raised and perceptible to the eye. The whole region of dullness is very sensitive. Four leeches to be applied to anus.

℞ Pepsinæ sacchari gr. x. before meals.

February 22d. No relief. Belladonna plaster removed. Turpentine stupes to be frequently applied to abdomen. Omit syrupi manganis iodidi.

℞ Syrupi ferri, sodæ calcis, et potassæ hypophosphitis ʒi. every four hours.

February 26th. Complains of a choking sensation, evidently caused by flatulency, especially troublesome at night. Subcutaneous injection of one sixth of a grain of morphine at five o'clock p. m., and continue chloral.

March 9th. The hepatic enlargement has rapidly advanced. The lower portion of the liver now extends one and one half inches below the costal arch, is readily felt to be smooth and regular. Continuous with it is a prominent tumor with rounded outline, which, passing down four and a half inches to the right of the median line, reaches two and a half inches below the umbilicus, then extending two inches to the left of the median line, slopes upward to the ensiform cartilage. The vertical hepatic dullness in the right axillary line measures six inches, in the mammary line six inches, and in the median line to lower edge of tumor eight and one half inches.

The tumor is smooth and tense, with an indistinct sensation of fluctuation, not apparently adherent to the abdominal wall, but very sensitive to pressure, especially to the left of the umbilicus. The rest of abdomen and the lumbar region are resonant. There is no ascites, no œdema, no enlargement of abdominal veins or lymphatic glands. The conjunctivæ show a yellowish tint, but the skin is not jaundiced.

At present there is no cough, no dyspnoea. The lungs and heart are normal. The spleen is somewhat enlarged vertically. He has not had rigor, nor is there any history of dysentery, or known cause of tropical hepatic abscess.

There is no pulsation in the mass, no neuralgic pain, and no marked sign of constitutional trouble.

The diagnosis of a cyst, probably of the liver, was made, and a puncture at its most prominent point, one inch above and to the left of the umbilicus, made with the aspirator. Ninety-two ounces of a chocolate-colored, freely-flowing fluid was obtained. Towards the close of the aspiration the patient complained of pain referred to the end of canula, while at the same time the opposite wall of the cyst could be felt drawn against it. The withdrawal of the fluid was followed by a complete effacement of the tumor and entire flaccidity of abdomen.

The puncture was covered with adhesive plaster. The patient was directed to keep on his back, and no food or drink to be taken till evening.

Half-past five P. M. Has been very comfortable; quite free from pain, without nausea or vomiting. Pulse 68. Temperature 98.8°. Respiration 20. May have milk during the night, in small amount at a time.

Dr. E. G. Cutler very kindly made an examination of the fluid, with the following result:—

Reaction neutral to test-paper. No perceptible distinctive odor. Specific gravity 1012. No bile pigment discovered. Albumen present, at least thirty per cent. in amount. No urea detected. An amorphous residue on slow evaporation. Under the microscope red blood-corpuscles, many of them crenate, in large numbers, forming half the bulk of the fluid. Granule corpuscles in all stages of degeneration, in size varying from that of a red corpuscle to three times its size; some of these corpuscles were pigmented, containing it in little crystals (form not determined; they resembled those of blood, however). Certain masses of pigment very dark, alone, varying from size of blood corpuscle to larger; relatively few bacteria. Extraneous matter. The average of ten careful countings of these red and granule corpuscles in a field of known size in an undiluted state gave for the red 69.8, for the granule cells .2. That is, the proportion was as one to three hundred and forty-nine. The average, in health, of the ratio of the white corpuscle to the red in ordinary blood is one to five hundred or seven hundred. Here I take it the granule cells represent the white corpuscles having fattily degenerated, and (as seen) in some instances having taken up the red corpuscles in their interior, which subsequently degenerate. The inference, therefore, is that an exudation or extravasation of blood has taken place into a cavity, and the time elapsed *since* this has allowed a change to take place in the fluid. There were no crystals other than the pigment, and no free fat or cells other than those mentioned. That the coloring matter was due to blood chiefly was shown by chemical tests.

March 10th. Has had a very comfortable night, without vomiting. There is slight tenderness in abdomen, which is somewhat distended. A. M. Pulse 80. Temperature 98.8°. Respiration 20. Omit all medicine.

March 14th. A. M. Pulse 72. Temperature 98°. Respiration 24. P. M. Pulse 88. Temperature 98.8°. Respiration 28. Last night was troubled with pain, most marked in left hypochondrium, but spreading all over abdomen, and increased by full breathing. The abdomen is everywhere tympanitic, ex-

cepting the line of liver dullness, which passes one inch below the right costal arch. There is no vomiting. The pain seems to be caused by flatulency.

R̄ Pulv. camphoræ,

Pulv. capsici,

Pulv. zingiberis āā gr. vj.

M. ft. pil. No. 6. One three times daily.

March 20th. Has improved during the past week. Temperature has remained normal. To-day went down town to attend to business of some importance.

March 25th. A. M. Pulse 86. Temperature 98.4°. P. M. Pulse 70. Temperature 98°. For three days the pain has been growing worse, with slight vomiting last night. Abdomen everywhere very tympanitic, but not very tender. Omit pills of ginger and capsicum. Carbo. ligni ʒi. every four hours, to be given in French wafer, thus reaching the stomach in a perfectly dry state.

April 3d. Has great relief from the charcoal. Hepatic dullness in mammary line normal. There is still constant and at times violent pain in left hypochondrium. Urine has decreased, and is passed with some difficulty.

R̄ Ext. buchu tid. ʒi. every four hours.

Urine is acid; specific gravity 1022; no albumen; no casts.

April 10th. Has remained about the same, but the pain the last two days has been less marked. He wishes to go to his home in Philadelphia, and is discharged, relieved.

WORCESTER CITY HOSPITAL.

MEDICAL CLINIC.

Three Cases of Eczema.—CASE I. A mechanic, aged thirty-seven. Two years ago had, for the first time, a severe attack of eczema, which appeared on the face, fore-arms, and legs, confining him to the house for six weeks. One year ago this was repeated, but he recovered in four weeks.

Ten weeks ago the disease again showed itself, but instead of being confined to the localities already mentioned it spread till nearly the whole of the cutaneous surface became involved. The condition of the patient now became pitiable in the extreme; the itching was intolerable, the exudation very profuse, saturating his clothing and even dropping from his hands; his suffering was so intense as to render him at times delirious.

He has been treated with Fowler's solution internally, and emollient and also astringent applications, with apparent benefit, which, however, has been only temporary, the disease, after seeming to be subdued, becoming suddenly and severely aggravated. The patient is much reduced in strength; bowels are constipated, but appetite continues good.

On admission to the hospital he had a warm bath, which gave him great relief. The bath was ordered to be repeated twice a day, medicated with two ounces of bicarbonate of soda, the affected surface to be then covered with carron oil; he was also ordered a Seidlitz powder every morning. After three days of this treatment he appeared to be very much better, but on the fourth day was as badly off as ever. The bath was then ordered for once a day only, the oil dressing continued, and five drops of Fowler's solution three times a day.

On the ninth day after admission the condition of the patient was but slightly improved. The baths and oil dressings were ordered to be discontinued and the following lotion to be used instead:—

R̄ Acidī hydrocyanici dil.	3 i.
Bismuthi subnitratī	3 ij.
Aquæ	3 viij. M.

This seemed to produce immediate and very satisfactory effects; the itching was allayed almost instantly by the application, the exudation began to dry up and healthy skin to appear. The improvement of the patient was constant as long as he remained in the hospital, and in four weeks after his admission, or fourteen weeks from the time of the outbreak of the disease, he was discharged, very much relieved.

CASE II. A laborer, fifty years old, has chronic eczema, with which he has been troubled for the last three years; this affects various parts, irregularly, and has now become so bad as to disable him. The eruption is very itchy, the affected portions of skin much thickened, and the exudation and redness are slight. The patient is debilitated, but no other disease can be detected.

The case was treated by the application of Hebra's diachylon ointment; also a tepid bath with tar soap daily, and eight drops of Fowler's solution after each meal.

After three weeks of this treatment the patient was discharged, almost entirely well.

CASE III. A young woman, deformed, nervous, hysterical, was admitted with eczema rubrum affecting the whole surface of the left leg from the middle of the foot to the middle of the calf. The disease was of five months' duration, and various remedies had been tried without relief. The affected skin had a very high color, and was uniformly and moderately infiltrated; the exudation was not excessive. The patient complained bitterly of the eruption and of pain in the bone (tibia), particularly at the internal malleolus. She was very wakeful, her appetite was very capricious, and her bowels were obstinately constipated during the whole of her stay at the hospital.

She was ordered to keep in bed and to have the eruption well dusted with powdered starch, and to take a saline laxative every morning. This treatment was continued for a fortnight; at first it seemed to be beneficial, the eruption becoming drier, and healthy skin appearing at its edges; this condition, however, was but transient, and at the end of the fortnight the leg was not improved, except that the pain and swelling were, perhaps, not quite so marked as at first.

Diluted oil of cade was then applied to the whole of the affected surface; this application was very painful, but followed by some improvement for a day or two, after which it seemed to have no further effect, though it was continued for sixteen days. The leg grew no worse, and looked better at the end than at the beginning of the last period; the patient, however, still complained much of pain, and was very nervous and uncomfortable. It was now ordered to omit the oil of cade, to give compound rhubarb pills at night, and to apply the following ointment:—

R̄ Potass. bromid.	3 ss.
Unguenti	3 i. M.

This, in turn, was followed by some improvement, and the affected part looked better than at any previous period of the treatment, but after the second day of trial this failed to give satisfaction, and in a few days was discontinued. The patient had been in the hospital six weeks, the eruption was somewhat improved, though still severe, and apparently very obstinate. Resort was now had to the "chloral wash" extensively used in this hospital as a surgical dressing, and the affected surface was kept wet constantly with the solution (in the proportion of three grains of chloral to the ounce of water). After only three days' use of this dressing the eruption, the itching, and the cutaneous pain entirely disappeared, some redness of the skin only remaining.

CHARLES A. PEABODY, M. D.

COMPARATIVE MORTALITY OF PROVIDENCE AND ST. PAUL.

MESSRS. EDITORS, — An opportunity now presents itself of comparing the mortuary statistics of Providence, R. I., and St. Paul, Minn., for the coldest and warmest winter months known for years in the respective cities.

Dr. Snow, in his monthly report, says, "It is a popular idea that very mild weather is very unhealthy." He refutes this idea with the mortuary statistics for the months of January, 1875, and January, 1876.

January, 1875, was the coldest January known for years, while January, 1876, was the warmest for years. The death-rate was as follows for the two months: —

January, 1876.		January, 1875.	
Whole number of deaths	115	Whole number of deaths	159
Pneumonia	15	Pneumonia	35
Consumption	22	Consumption	31
Croup	5	Croup	10
Bronchitis	1	Bronchitis	6
Scarlatina	4	Scarlatina	19

February, 1875, in Minnesota, was perhaps the coldest month ever known in the United States, or at least of which we have account. The mercury was almost constantly below zero in St. Paul. February, 1876, was correspondingly mild.

The death-rate in St. Paul, for February, 1875, was the lowest for years for that month, while February, 1876, was of average mortality. The death-rate was as follows for the two months: —

February, 1876.		February, 1875.	
Whole number of deaths	20	Whole number of deaths	28
Consumption	3	Consumption	4
Croup	1	Croup	0
Inflammation of lungs	4	Inflammation of lungs	3
Convulsions	1	Convulsions	3

I never accept comparative mortuary statistics as correct except based upon the official census for the same year. Fortunately this year (1875) a census was taken in both cities, Providence and St. Paul.

Population of Providence, 1875	100,675
Population of St. Paul, 1875	33,067

The death-rate in Providence for the month of January, 1876, was 13.7 per 1000 of population; for January, 1875, was 18.9 per 1000 of population.

The death-rate in St. Paul for the month of February, 1876, was 10.1 per 1000 of population. February, 1875, 7.2 per 1000 of population.

I was led to make the above curious comparison of mortuary statistics because I believe that Dr. Snow's figures are as nearly correct as a conscientious statistician could make them. The mortuary record of St. Paul is correct because no one is buried without a permit from the health officer.

The question is now asked, Do you propose to controvert Dr. Snow's opinion? I reply, No, I merely wish to verify by figures a remark made to me by a physician, who, like myself, has dabbled much in medical and mortuary statistics. "You can prove anything you want to," said he, "by mortuary statistics." Experience has taught me that his remark was practically true.

BREWER MATTOCKS, M. D., *ex-Health Officer St. Paul.*

NORFOLK DISTRICT MEDICAL SOCIETY. — The annual meeting will be held at the Willard House, Hyde Park, on Tuesday, May 9th, at eleven o'clock. Election of officers. Address by Dr. P. O'Meara Edson. Papers will be read as follows: Dr. Henry A. Martin, Treatment of Fractures of the Fore-Arm; Dr. Robert T. Edes, Intracranial Syphilis; Report of Committee on "School Children and Infection." Dinner at 1.45 P. M.

ARTHUR H. NICHOLS, *Secretary.*

MESSRS. EDITORS, — I cut the inclosed from a New Hampshire country paper. The notices appear in sequence, and evidently belong in the same category.

"Nothing is so insidious as a cold or a cough. Poison does not make a swifter progress in the system. Use promptly the only sure antidote, Hale's Honey of Horehound and Tar.

"Pike's Toothache Drops cure in one minute.

"A. A. Hayes, M. D., State Assayer of Massachusetts, pronounces Hall's Sicilian Hair Renewer an efficient preparation for cleansing the skin of the head, promoting the growth, and restoring the original color of the hair when it has become gray."

The individual who prostitutes an honorable civic office to serve the interests of vendors of articles such as the above appears to be an honorary member of the Massachusetts Medical Society. Can no steps be taken to procure his expulsion? X.

Boston, April 22, 1876.

BOOKS AND PAMPHLETS RECEIVED. — *Résumé of the Transactions of the International Medical Congress at Brussels, 1875.* By Geo. W. Wells, M. D. (Reprinted from the St. Louis Medical and Surgical Journal.)

Warm and Hot Water in Surgery. By Frederick Hyde, M. D. (From the Buffalo Medical and Surgical Journal.) 1876.

Some Special Affections of the Oesophagus. By F. W. Godon, M. D. (Reprinted from the Pacific Medical and Surgical Journal.) San Francisco. 1876.

American Clinical Lectures. Vol. II. No. 3. The Treatment of Mild Cases of Melancholia at Home. By E. C. Seguin, M. D. New York: G. P. Putnam's Sons. 1876.

Transactions of the Thirtieth Annual Meeting of the Ohio State Medical Society, held at Put-In Bay. Cincinnati. 1875.

Sixty-Second Annual Report of the Trustees of the Massachusetts General Hospital. 1875.

Sur l'Avortement spontané dans les premiers Mois de la Grossesse. Par le Dr. A. Leblond. (Extrait des Annales de Gynécologie, No. d'Août, 1875.)

An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M. D., London. Second American from the Third Revised and Enlarged English Edition. Philadelphia: Henry C. Lea. 1876.

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ARSENICAL PAPER-HANGINGS.¹

BY FRANCIS H. BROWN, M. D.,

Surgeon to The Children's Hospital, Boston.

DURING the past year I have had occasion to give advice in a number of cases involving grave symptoms, of long and persistent continuance, and of a nature so masked as to puzzle, for a time, both friends and physicians; but which, from the history and the symptoms, joined with the surroundings which I found in each case, I believe to have been due to arsenical poisoning from wall-papers on living or sleeping rooms, which the patients had occupied for a longer or shorter time.

It will be remembered that the pigments used by manufacturers of arsenical wall-papers are composed very largely of arsenite of copper and of aceto-arsenite of copper or Schweinfurth green, the former containing fifty per cent. and the latter fifty-eight per cent. of arsenious acid, which dangerous elements are applied to the paper by size, giving but a feeble cohesion when exposed to the air or to the danger of attrition from various causes. Even the flock papers, which have been looked on as innocuous, often have a layer of arsenical pigment, which in time becomes equally dangerous.

The subject of arsenic-bearing wall-papers has been freely discussed in both home and foreign journals for the past twenty years; nowhere more fully or satisfactorily than in our own State Board of Health Report for 1872. Cases and series of cases have been given, some by physicians who have experienced the ill effects in their own persons, and all bearing a striking resemblance to those I have had under notice.

The symptoms in these cases have been of a composite character, affecting the system generally, with more marked evidences of disturbance in the digestive and respiratory systems, and with a strong tendency to neuralgic and mental disorder.

In connection with these cases I shall show specimens of paper from rooms which the patients have occupied, and a considerable number of others which have been offered for sale by manufacturers, and intended

¹ Read before the Boston Society for Medical Observation.

for domestic use. The former specimens offer the strongest evidence for the opinion I formed of the disturbing element.

The series of symptoms is very well described in their usual sequence by a non-professional writer in the *British Medical Journal* for July 22, 1871. Referring to a number of cases which occurred in his own family, he says, "First appeared irritation of the mucous membrane, causing diarrhœa and vomiting, with various other symptoms of severe gastric derangement, resulting in permanent indigestion; also incessant severe cold in the head, which in one instance lasted for several years without being touched by any remedy; ulcerated throats, with acute inflammation, resembling diphtheria and quinsy; severe spasmodic cough, spasmodic asthma, bronchitis, and congestion of the lungs; soreness of the mouth, lips, and tongue, which appeared as if scalded in patches; inflammation of the eyes and eyelids (the conjunctivæ being invariably bright red), in one case threatening absolute loss of sight; congestion and torpidity of the liver, with the various symptoms resulting therefrom; and severe bilious and feverish attacks. There was, in short, irritation of every organ. In many cases, if not in all, the action of the heart was weakened, and in some palpitation frequently occurred. There were pains in various parts of the body, especially across the shoulders, down the spine and limbs, also in the joints, which were often stiff and swollen; scaling of the skin, and irritating eruptions, which no remedy ever relieved except Turkish baths. The effects upon the nervous system were most remarkable, producing a thoroughly shattered condition; great irritability, depression, and tendency to tears, with unusual prostration of strength. . . . The list also includes giddiness, headache, acute earache, and neuralgia; bleeding at the nose; frightful dreams; hysterical attacks; faintness; cramps, rigor, and numbness of the limbs; rigid spasms and convulsions. The last symptoms developed in the worst cases were loss of memory and threatenings of paralysis, also spasms, with twitchings of the body and limbs."

CASE I. Mrs. A., a lady fifty-six years of age, in easy circumstances in life, of a peculiarly active and nervous organization, of regular habits of life, was exposed in her bed-chamber, for a number of years, to the influence of arsenic paper. She had been previously entirely healthy, never having had any illness other than temporary troubles of small moment. Menstruation ceased to occur within five years without any abnormal symptom, the critical period being only marked by the cessation of the monthly flow.

Twelve years ago she married and came to live in a home near an inland city. Her chamber was on the ground floor of a large house, and had been newly hung with a paper of a light green hue. The room was occupied only at night, most of the time during the day being

spent in other parts of the house, and, in the summer months, in the open air. To this circumstance, of course, is due her freedom from trouble for a considerable period.

Three or four years after occupying the room, or perhaps a little earlier, she began to have a feeling of general malaise. The first thing she recalls is a sensation of exhaustion, which she then thought due to one or two severe falls, but which is now more satisfactorily explained. Being a person of strong will, she made every endeavor to throw off or resist this sensation; but it would as constantly return. It was especially difficult for her to rise in the morning, although awake at a very early hour. The debility increased as the illness went on. She would feel quite well and strong for a time, and would at once experience the sense of prostration on making any attempt at movement, and, at times, on any unusual mental exertion, making the duties of a housekeeper particularly onerous. She speedily increased considerably in weight, from about one hundred and twenty-five to one hundred and sixty pounds; this condition lasted for some months, and then gave place to emaciation.

At certain intervals afterward the various symptoms of the digestive, nervous, and circulatory systems, which I shall mention, appeared and increased in severity up to the time I saw her, in June, 1875. The precise date of the access of each symptom is unknown, but each had shown itself, either continuously or at intervals, for a number of years before.

I found her in bed, perfectly prostrated, hardly able to move hand or foot; with skin very dry and rough; hands and feet cold or cool to myself and to the patient. I do not recall either the pulse or the temperature, though both were duly noticed at the time. Emaciation was marked; a countenance naturally rosy had become sallow; tongue inflamed, dry, cracked, with brownish coat in centre; gums also dry and angry. The sensation of dryness was apparent to herself, with a feeling as if the mouth were lined with flannel. No sensation of dryness or pain in the throat or œsophagus. Nausea, often about ten P. M., and nearly always when she wakened, but not during the night, unless she happened to be up and about for any purpose. At times a pressure in the stomach; frequent thirst of an evening, seldom during the day; capricious appetite.

During her early years, at her home in Philadelphia, she had often had diarrhoea, but she had been free from it for some years. Two or three years ago it came on at intervals, its presence being ascribed to diet and the usual causes; of late it had been more marked, the discharges watery and painful. She had never noticed blood. No oppression in breathing; no catarrhal trouble, cough, or other noticeable pulmonary complication. Her eyes had for some time shown signs of

weakness and congestion. They had previously been very strong. At last she could not open the lids at night without lifting them with her fingers. At the time I saw her there was marked conjunctivitis, as if from some external irritation. No headache, but an "aching, tired sensation" in base of the brain, which ran down the spine to the lumbar region. At times, during the past few years and never before, a tenderness in the neighborhood of the liver, which would pass away after a slight diarrhœa. Her temper was never irritable or much depressed, but her household duties seemed to weigh on her, and were more than ever a responsibility. A carbuncle or perhaps a large boil on the back was reported as having occurred three or four years before, otherwise no eruptions, carbuncles, or furunculi. The sleep was more easily disturbed than when in health, and she had often wakened chilly or feverish. The feet and legs, to the knees, were frequently cramped, and had been relieved by warm applications and friction.

The symptoms detailed had always been, to a certain extent, relieved during absence from home; but in about ten days after her return the exhaustion and other evidences of disease would recur, and soon be as bad as ever. The symptoms had been most speedily relieved on coming to the salt water at New York or Boston, and under such circumstances almost entirely disappeared. The air of Philadelphia was less beneficial, but no permanent relief was experienced as long as exposure to poison was renewed on her return home.

The marked symptoms in this case seemed to be of the mucous membranes and the nervous system, to be increasing in severity, alleviated by absence, but returning on fresh residence; and so apparently due to a local cause. There was no malarial influence in the neighborhood; the air, though somewhat damp, was pure and healthy; no imperfect drainage. On examining the paper of the room I found it heavily loaded with arsenic. The patient now recalls the fact that no room in the house was so difficult to clean as her bed-chamber, and servants had made similar remarks. She herself found it almost impossible, for some reason unknown to her, to remain in her room, from the sensation of extreme exhaustion.

CASE II. The husband of this lady had occupied the same room, but his frequent absence from home on business and his out-of-door life had given him less exposure. Previously healthy, he had, soon after his occupancy of the room, begun to have tonsillitis, with dry tongue and mouth, and finally these symptoms continued throughout nearly the entire winter. He increased very markedly in weight, became dyspeptic, and had a foul breath, with a general sensation of malaise. He at last occupied another room at night, and was at once relieved and has had no sore throat to this day.

CASE III. Mrs. B., an amateur artist, had in like manner a bright

green paper on her studio. After spending some time in her room, in which she was occupied several hours each day, she would come out thoroughly exhausted; was very "logy," became bloated, and was generally running down. For some time she had had an ulcer on the face, which had not yielded to medical treatment. The library was hung with a green paper of a dangerous hue, and the bed-chamber with still another. A flock paper was also employed in some part of the house — where I do not know. The papers on the studio and chamber, as determined by analysis, are heavy with arsenic; that on the library contains a smaller amount, and a considerable quantity was found in the flock paper. The patient went to New York for some weeks, and remained while the paper was being removed and her house repaired. She speedily improved in health, the ulcer on the face took on a healthy action and was quickly cured, and the sensation of exhaustion disappeared.

CASE IV. Mr. B., the husband of this lady, being less exposed, suffered less, but he was for a considerable time the victim of conjunctivitis, which disappeared on removing the paper from the walls.

CASE V. The case of Mr. C. was very similar to that of the lady first mentioned. His case, however, was marked by more violent febrile manifestations and delirium, and he was for some time in danger of his life. One eye was lost by the sequelæ of conjunctivitis, and the other permanently injured. He was for a long time unable to sleep. A light-green paper was on his chamber and sitting-room. His removal from the house put an end to the reception of the poison. He is now much better, is recovering strength, flesh, and appetite, and his ability to sleep is now restored.

CASE VI. Mrs. C., the wife of the above, for the three years they had inhabited the arsenic-rooms, had had more or less sore throat, for which she was unable to account. During the first six months after leaving the rooms she was much better, and at the end of a year was entirely well and now has no trouble.

CASE VII. Mrs. D. had a green paper on her library and another on the dining-room. I tested both, and found much arsenic in the former and a less amount in the latter. The next day these papers were removed from the walls, and a tendency to dysenteric diarrhœa, which had caused much trouble, at once diminished, and the attacks have been much lighter. Two canaries had died in the library without known cause, except that they showed signs of poison.

CASE VIII. Mr. E. (not my patient), who had slept in a room with a bright-green paper for some years, was seriously ill with symptoms referred to the nervous system and digestive organs. I never saw the patient, but am led to believe the symptoms were of such character as to be due to arsenic. He went to Europe for a change, and another

gentleman, who took the house furnished, desired me to examine the paper. I did so, and found it loaded with arsenic.

The paper in the case first mentioned was not removed from the wall until after the marked convalescence of the patient in another room, to which she had been carried. Three or four persons were occupied in the work. One man got a sore mouth, having been previously well, and knowing no reason to account for it; another had every symptom of a cold, and felt a general stiffness of his limbs; a woman was in the room for half an hour, and her throat, previously entirely well, became rough and remained so for some days. A paper-hanger in the same neighborhood remarked that his mouth was always sore when he put on green paper, and his men often spoke of their eyes becoming inflamed and their hands ulcerated.

I do not feel called on, in relating these cases, to enter upon the discussion of various points which naturally suggest themselves. The method of dissemination of the poison, the susceptibility of some persons to its influence and the immunity of others, and other points, have been often considered, and an opinion has been formed in the matter in the mind of every practitioner of medicine. One point, however, seems worthy of our attention, and cannot be too strongly urged: the necessity of sanitary measures to avert the evils arising from the use of arsenic in wall-papers and other articles of domestic and personal use; the duty of the physician to his patients and the community in warning them against the use of such articles, and the obligation incumbent on the state to enact and enforce laws for the protection of the people from dangers which we know to be insidious, but powerful for great peril to all those exposed to their influence.

It may be true in our land, where "liberty runs mad," that the view expressed by Dr. Draper, "that the rights of individuals and of industrial pursuits are deemed too sacred to allow of excessive restriction, and a prohibitory law to affect the manufacture or use of arsenical pigment would be of questionable force," a view in which, so far as this particular subject goes, I am inclined to disagree with him. Legislation with the object in view of preventing the use of arsenical papers has been employed in some of the more despotic nations of Europe, where the care of the citizen is considered of the utmost importance to the state. The case of the gentleman who returned to his house to find it in the possession of the sanitary police, engaged in removing a beautiful arsenical paper which he had just applied to his walls, is in point. The laws relating to slaughtering cattle and preparing meat for the market met with vigorous opposition a few years ago, but they are now looked on, even by the butchers themselves, as highly salutary, and no hindrance to private rights or emoluments.

The fact that the most beautiful, the most delicate, and the most

easily manufactured green color is produced from arsenic will always offer a strong incentive to manufacturers of wall-paper, to painters, makers of cloth fabrics, confectionery, card-stock, and other materials in the arts.

As an adjuvant to legislation, or to take its place, if such a course be impossible, it seems incumbent on physicians to act as instructors to the community. I fully agree with Dr. Draper, to quote once more from his report, that "if there be awakened in the community some appreciation of the dangers which belong to the indiscriminate use of emerald green colors, there will be no need to invent methods of repression in behalf of the public health; for reasonable people, informed concerning the risks, will not be likely to test their own tolerance of arsenic or to subject their children to it. The demand ceasing, the supply will cease, and a correct taste in color will find its gratification in agents which possess no poisonous character." It is safer, however, to consider that a certain proportion of the community is *not* "reasonable," and that they are at once thoughtless and careless of the safety of themselves and of those around them. To gain the needed information the public requires frequent and often-repeated injunctions from those in whom they have confidence, and I feel it to be a duty of our state and local boards of health not to be neglected, to coöperate with physicians in extending a knowledge of the dangers of arsenic.

Arsenic *green* is a term which, it would seem, is sufficiently well understood by a considerable proportion of the intelligent members of the community. Large quantities of such papers are, however, still sold to go into the country and to those less careful of the hygienic condition of their households. It is less generally known that the presence of arsenic is not confined to green papers alone, and I show you this evening a number of specimens of wall-papers of various hues which may be looked on as very innocent in their outward appearance, but which I have proved by analysis to contain arsenic in considerable amounts. Many of them have a greenish hue, and in such the arsenical pigments have been used to tone down other colors. It is safe to consider that *all* wall-papers which contain arsenic, in any proportion whatever, are dangerous elements, in the light of modern sanitary hygiene.

RECENT PROGRESS IN OPHTHALMOLOGY.

BY O. F. WADSWORTH, M. D.

Neuro-Paralytic Keratitis.—This subject has been reinvestigated by Senftleben,¹ by cutting the trigeminus in rabbits, and his results agree entirely with the view of Snellen, that the keratitis is due solely

¹ Virchow's Archiv, Bd. 65.

to the fact that the loss of sensibility of the eye deprives it of its natural protection and exposes it to external injuries. So long as the eye on the side on which the trigeminus had been divided was protected by a cap of wire netting it remained sound, but when not so protected the characteristic keratitis ensued within ten or twelve hours. The first change observed was a circumscribed opacity of the cornea, varying somewhat in place, but generally nearer the anterior angle of the eye, never reaching at first the periphery; only some hours later did an opacity appear at the periphery and progress toward the centre. Microscopic examination at various periods after the commencement of the keratitis showed that the central opacity was non-inflammatory, but due to a necrosis of the corneal tissue; the later peripheral opacity was produced by the usual inflammatory immigration of white blood corpuscles.

It was evident that evaporation, by some regarded as an active agent in neuro-paralytic keratitis, had no influence, since the wire mesh-work, which did not check evaporation, yet afforded complete protection. Only in a few cases, when the animals had been confined in a narrow and dusty place, did a slight conjunctivitis occur, but that this was owing to the entrance of dust, etc., was shown by the rapid subsidence of the conjunctivitis when the rabbits were placed under more favorable conditions.

The view that trophic fibres accompany the trigeminus, and that their division renders the cornea less capable of resisting injury, is that one which has seemed to have most evidence in its favor. If this were true, equal injury to the two eyes should produce a much more severe effect on the side of the cut nerve. To decide this point Senftleben produced a variety of injuries on both eyes, and found that the insensible cornea, protected by the netting, suffered no more severely and healed as readily as the other. Even when the injury was severe enough to produce necrosis of a portion of corneal tissue, precisely similar to that which appeared on the side of the divided nerve when the eye was not protected, the effect was the same and the process of healing ran a parallel course in both eyes, the non-sensitive one being subsequently protected. The idea of the presence of trophic fibres in the trigeminus must therefore be abandoned.

Senftleben also states that the lower part of the trigeminus at the point where it is divided, in which part Büttner and Meissner located the trophic fibres, belongs to the second branch of the trigeminus, not the first. Moreover, in six cases in which he failed to divide this portion of the nerve, the characteristic keratitis followed exposure of the eye.

Sarcoma of the Iris. — Dr. Kipp¹ describes a case of white spindle-

¹ Archives of Ophthalmology and Otology, v. 1.

celled sarcoma, growing with broad base from the lower and inner quadrant of the iris, and projecting into the anterior chamber so as nearly to cover the pupil. The patient was a healthy man of thirty-six years. The tumor had been first noticed twelve years before, as a reddish nodule the size of a pin's head; had grown at first very slowly, but within the last month had more than doubled in size and caused occasional pain in the eye. Removal of the tumor, with the portion of iris to which it was attached, was effected through an incision in the sclero-corneal junction. Eighteen months later the eye was still free from disease. So few cases of sarcoma of the iris have been placed on record that each furnishes some welcome additions to our knowledge of the subject, and this case is especially interesting as the first which, after removal of the tumor without enucleation of the eye, has been observed long enough to give tolerable security against recurrence. Two cases treated in this way are briefly referred to by Arlt,¹ but they had been under observation only for five or six weeks after the operation, by no means long enough to justify an opinion as to return, and in Carter's² case of sarcoma of both irides there was recurrence within six weeks.

Color of the Macula Lutea. — The statement of Schmidt regarding the color of the macula lutea which was given in the report one year ago needs some explanation. In a recent paper Schmidt³ repeats that on opening eyes enucleated during life or very shortly after death, the macula region presents the same reddish-brown color as it does during life with the ophthalmoscope; the yellow color seen later being the effect of post-mortem change. When, however, the fresh retina is removed and spread out in vitreous fluid, the color of the macula is seen to be yellow, somewhat darker in the neighborhood of the fovea; only the bottom of the fovea is reddish-brown. The darker appearance of the macula as seen with the ophthalmoscope or in the freshly opened eye is not due, as has been asserted, to a darker color of the choroidal pigment at this part, but to the absorption of light by the yellow pigment of the retina. When in a fresh eye the retina is carefully loosened from the choroid and slid along so that the macula region lies over another portion of the choroid, it presents quite as dark an appearance as in its original position, and the choroid of the macula region does not present any darker tone than elsewhere.

Neuritis Descendens. — The direct progression of inflammation from the base of the brain along the optic nerve to the eye has been anatomically proven only in very rare instances. Blessig's⁴ case is therefore of

¹ Handbuch der ges. Augenheilkunde (Graefe and Sarmisch), iii. 2.

² See Report on Ophthalmology, JOURNAL, May, 1874.

³ Archiv für Ophthalmologie, xxi. 3.

⁴ Monatsblätter für Augenheilkunde, page 420, 1875.

interest. A peasant twenty-nine years old, without special cause, was attacked with violent headache, dizziness, and vomiting, and on the following day observed decrease of vision in the left eye. Four days later the cerebral symptoms had rather increased, there was still headache and vomiting, the whole left half of the skull was sensitive on percussion. Right, eye normal; left, nearly complete paralysis of oculo-motor nerve, the optic papilla moderately swollen, its outline obliterated, near its border numerous radiating extravasations, vision $\frac{2}{3}$. Ten days from the commencement of the attack there was febrile disturbance, high temperature, much vertigo, mental faculties not quite clear. Right, eye still normal. Left, the oculo-motor paralysis complete, the ophthalmoscopic appearances little changed, the papilla still but little elevated, the extravasations rather more numerous, vision completely lost. The cerebral symptoms rapidly increased and the patient died thirteen days from the attack. The autopsy showed purulent basilar meningitis, chiefly on the left side, the ventricles slightly distended with turbid fluid. The left opticus from its exit from the chiasma to the sclera was half as thick again and harder than the normal right opticus. No fluid issued on incision of the nerve.

On microscopic examination the inner and outer sheaths were found nearly united by inflammatory change, and along the whole length of the nerve was a great increase of the interstitial connective tissue. The bundles of nerve fibres were much smaller than in the other opticus, but the connective tissue surrounding them was much increased and studded with numerous nuclei.

Blessig considers three points of importance as to differential diagnosis. First, the rapid loss of sight. While in a neuritis caused by the collection of fluid between the nerve sheaths it is the rule that an amount of vision, apparently in marked contrast with the ophthalmoscopic appearances, is retained for a long time, even months or years, it is to be expected that a much more rapid loss of vision will ensue when an inflammatory process involves the tissues between the bundles of nerve fibres.

Another point of distinction is the one-sidedness of the affection, for, unless tumor or some other special mechanical obstruction exist on one side, it is difficult to see how fluid from the arachnoid space should enter between the sheaths on one side and not on the other. Finally, the swelling of the papilla in true neuritis descendens never reaches so high a degree as in choked disk, while the latter does not appear so vascular, and early assumes a grayish-white color, suggestive of atrophy.

Influence of Corneal Opacities on the Production of Strabismus. — Donders showed that convergent strabismus ordinarily depended on hypermetropia, and among the causes which assisted in overcoming the natural disinclination to double vision gave (1) congenital differences

in the visual acuteness or refraction of the two eyes; (2) opacities of the cornea, in consequence of which one of the double images would be less distinct and therefore less disturbing. Hirschberg¹ calls attention to another way in which corneal opacities in certain cases aid to produce strabismus. If the rays of a pencil of light coming from a luminous point fall upon a convex lens of sufficiently small opening, they are united behind the lens at some place on the axis of the pencil. On a screen perpendicular to the axis, situated at the place where the rays unite, a distinct image of the point from which the rays issue is formed. If, however, the screen be situated before or behind the place of crossing of the rays, a larger blurred image is formed on it, and this image will be situated on the axis of the pencil only when the portion of the lens through which the rays pass includes and is equally distributed about its centre. Supposing now the case of unequal refraction in the two eyes, there would be formed on the retina of one of them an indistinct image of an object looked at, and if a corneal opacity covered one side of the pupil of that eye, the image on its retina would not only be indistinct but also laterally displaced; there would therefore be double vision. With such a state of things, and hypermetropia of the better eye, a double incentive to squint would exist. Increased convergence would, on the one hand, enable greater accommodation and sharper vision in the good eye, and, on the other, remove the image formed in the poor eye to a less sensitive part of the retina, where it would be less disturbing.

Trephining the Sclerotic in Glaucoma. — In certain cases of glaucoma, in which iridectomy cannot be performed or might aggravate instead of relieving the symptoms, Argyll Robertson² proposed to trephine the sclerotic in order to allow some of the fluid contents of the eye to escape, and that the new, lax tissue filling up the opening might act as a safety-valve to avoid recurrence of increased tension. He had performed the operation only four times, but with an encouraging degree of success. The opening was made at the upper part of the sclerotic, over the junction of the ciliary processes with the choroid. Finding that the instrument used by Bowman for conical cornea was inconvenient on account of the too great pressure required, he had employed an instrument consisting of a narrow steel cylinder with a shoulder about one twelfth of an inch from the cutting edge, the half-inch of the cylinder above the shoulder roughened to allow a grasp for the fingers. In his last two cases a flap of conjunctiva was turned up before applying the trephine. In the first case tension had been permanently diminished and vision slightly improved; it was necessary to enucleate the eye subsequently on account of sympathetic irritation of the other, due,

¹ Centralblatt, 1875, page 593.

² British Medical Journal, page 193, 1876.

however, to the original disease, not to the operation. Recurrence of increased tension in the second case was accounted for by the presence of a tumor in the eye. In the third case the operation effected relief of pain and tension. In the fourth case the worse eye was trephined and iridectomy done on the other. The result was good vision and removal of abnormal tension in both, but in the trephined eye there was diminished power of accommodation, probably owing to injury of the ciliary muscle by the trephine. Extravasation, which occurred in the third case, indicated a disadvantage of the operation. Possibly the sclerotic only might be penetrated, without wounding the choroid, and a more gradual relief of tension be effected.

LECTURES ON ALCOHOL.¹

THESE lectures, though hardly fulfilling the promise of the lecturer (page 15) "to be plainness itself, and that not only in mode of expression but in matter of it," are yet a valuable contribution to the literature of this important subject. The author does not consider alcohol a food, since its freedom from the element nitrogen forbids the statement of "its being a constructive agent in the building up of the body." Dr. Richardson would also attribute its "fat-forming" properties more to the sugar that may be added than to the alcohol which holds the sugar in solution; or, to use his own words (page 103), "It does not certainly help to build up the active nitrogenous structures. It probably does not produce fatty matter, except by an injurious and indirect interference with the natural substances." The question in regard to the elimination and combustion of alcohol in the system is very concisely stated in the light of recent investigations: "If it will burn in the organism it will supply force, for it enters as the bearer of so much potential energy." Then (page 111), "If there be heat, and if there be product of carbon consumed in oxygen, then alcohol must rank as a heat-forming food." Carrying out this investigation, Dr. Richardson divides the "progressive stages of change of animal function" into four periods: (1) excitement accompanied with relaxation and engorgement of the capillary circulation; (2) excitement with muscular inability and deficient automatic control; (3) emotional excitement; (4) failure of heart's action and death. It will be noticed that he considers the effects only of a poisonous dose given at one time. The heat felt in the first stage is not due to the alcoholic combustion, but is a process of cooling, and the same sensation is experienced during the reaction from cold. The external temperature may be increased, but the internal temperature is reduced. During the subsequent stages the fall of the temperature continues, and is rapid during the fourth period. In his own words again (page 116), "An agent that will burn and give forth heat and product of combustion outside the body, and which is obviously decomposed within the body, reduces the animal

¹ *On Alcohol. A Course of Six Cantor Lectures delivered before the Society of Arts. By B. W. RICHARDSON, M. A., M. D., F. R. S., etc.*

temperature, and prevents the yield of so much product of combustion as is actually natural to the organic life, . . . and at the expense of the oxygen which ought to be applied for the natural heating of the body." Therefore, "whenever we see an unfortunate person under the influence of alcohol, it is our duty to suggest warmth as the best means for his recovery."

Dr. Richardson also discusses the dynamic influences of alcohol upon muscular work. He concludes his fourth lecture with these words: "Whatever good can come from alcohol, or whatever evil, is all included in that primary physiological and luxurious action of the agent upon the nervous supply of the circulation to which I have earnestly endeavored to direct your attention. If it be really a luxury for the heart to be lifted up by alcohol, for the blood to course more swiftly through the brain, for the thoughts to flow more vehemently, for words to come more fluently, for emotions to rise ecstasically, and for life to rush on beyond the pace set by nature, then those who enjoy the luxury must enjoy it — with the consequences."

It will not be wise to give more details of these lectures, yet one who reads them should remember that the subject is presented from one side, and not impartially treated by an unimpassioned man.

Dr. Anstie (in the *Practitioner* for November, 1873) says, "There is strong *à priori* probability that alcohol can afford available energy for bodily function," and to Dr. Anstie's researches Dr. Richardson appends great weight, so far as these may prove his side of the discussion. Now, Dr. Anstie (in the last paper by him on Alcohol, *Practitioner* for July, 1874) considers that it is "conceded that quite six hundred grains of absolute alcohol can be disposed of daily within the organism of an adult male without any perceptible injurious effect upon the bodily functions." No one should read these lectures in order to form an unbiased opinion, without reading the papers of Drs. Parkes, Dupré, and Anstie, all of which are exceedingly interesting as well as instructive.

Finally, we must pass an unfavorable criticism upon the undignified temperance harangue which introduces the pamphlet of Dr. Richardson to the American public. The cause of temperance has too long been injured by intemperate, one-sided tirades like this of Dr. Parker.

A.

THE GEORGIA STATE BOARD OF HEALTH.¹

THE State Board of Health of Georgia was organized June 9, 1875; therefore this, the first annual report, presents the proceedings of the board during a period of only four months, when the machinery was new, the friction greatest, and the critics most observant. We feel bound to remark at the beginning that the new health commission of Georgia has done itself great credit in its initiatory stage, and we are inclined to attribute the success mainly to the composition of the board. The energy of the secretary, a medical gentleman, appears to have been seconded heartily by the zeal and vigor of the

¹ *First Annual Report of the Board of Health of the State of Georgia, for the year ending October 12, 1875. Atlanta: R. A. Alston. 1876.*

nine other physicians who comprise three fourths of the members. Evidently, these men have entered upon their new work with an enthusiasm which is sure to be effective in promoting the sanitary welfare of the people of their State.

Beside the general report of the board and the record of its proceedings, we have, in the thick pamphlet before us, some special reports upon subjects pertaining to public hygiene. These papers were written by members of the board, and most of them have more than a local interest. They include the discussion of sanitary administration in its general aspects, school hygiene, the influence of trees on health, the sale of poisons as medicines and in the arts (including arsenical colors in wall-papers), prison hygiene, and the prevention of small-pox. All of these papers are interesting and instructive; if we were to mention the one which appears to us to be especially original, we should name the report by Dr. Cromwell on the influence of trees on health, a contribution showing extended research as well as intelligent observation.

The registration of vital statistics is made a department of the board's administration. This important part of the work has hardly begun to be put into practical operation as yet, and the results are meagre, but the methods adopted appear to have been formed according to the best models.

If this report is a safe guide by which to shape a prediction, we anticipate much excellent fruit from the labors of the Georgia board of health. The enterprise thus shown by a State just recovering from the effects of the civil war ought to excite the emulation of more prosperous communities which are slow to recognize the utility of permanent commissions designed in the interests of public hygiene.

HUTCHINSON'S ILLUSTRATIONS OF CLINICAL SURGERY.¹

So long an interval has elapsed since the appearance of elegant plates on pathology and surgery, which at one time formed such a prominent feature of medical libraries, that we confess ourselves to be somewhat startled by the formidable display which a busy London surgeon has found time to indulge himself in. With the great clinical facilities offered at the present day to students and practitioners in surgery, an attempt to instruct by means of large colored plates would seem like a return to the uncouth resources of the last century. Mr. Hutchinson, however, cannot be said to have laid himself open to any such reproach. The collections of drawings which have been accumulating during the past twenty years, and of which two fasciculi have thus far appeared are intended to illustrate rare and interesting cases in the practice of surgery and to impress forcibly upon the mind certain important clinical features of disease. The first fasciculus meets these indications in a most satisfactory manner, and we think there are few who will deny that Mr. Hutchinson has here trodden a new field, or, what is perhaps fully as interesting, has gone over old ground in the light of modern science.

¹ *Illustrations of Clinical Surgery*. Consisting of Plates, Photographs, Wood-cuts, Diagrams, etc., with Descriptive Letterpress. By JOHN HUTCHINSON, F. R. C. S. Philadelphia: Lindsay and Blakiston. 1876.

The first case is a frontal encephalocele, a rare form of disease, and likely to be mistaken for nœvus. The similarity of different cases of this variety of encephalocele is, however, very great, as is shown by several illustrations and by a few clear, concise explanations in the text. The author warns surgeons against operative interference in these cases. We have, however, seen one case successfully treated by ligature. Plate II. is an ivory exostosis of the orbit; the accompanying text gives one, in a few sentences, a clear idea of the seat, growth, and treatment of the disease. The subject of the next illustration is rodent ulcer. We regret that the general ignorance of physicians in regard to the pathology of this disease has not prompted the author to dwell somewhat more fully upon its different phases. The great deformity in well-advanced cases has been selected as the point to be illustrated. It would have added much to the value of the account had the earliest stages of the disease been included, when we find little more than an insignificant wart or ulceration upon the nose or cheek, and yet an appearance so characteristic that we may safely predict a formidable loss of substance, should the disease be left untouched. We must find some fault with the coloring of this plate. The surrounding skin has been tinged by a red halo, giving it an inflamed look which is not characteristic; a distinguishing feature between this and other forms of ulceration, as lupus, is the perfectly healthy character of the contiguous skin. Mr. Hutchinson, although recognizing it as a form of cancer, does not classify it as a variety of epithelial cancer, as is done by German writers. The succeeding illustrations, which carry us into the second fasciculus, are devoted to the different varieties of chancres, which subjects will prove interesting in light of the recent discussion in London on syphilis, in which Mr. Hutchinson took so prominent a part. Space will permit us to allude to but one other subject. Plate VII. contains two portraits of cases of hydrocele of the neck, and is a beautiful specimen of the high standard of these illustrations. The view that these growths originate from the lymphatic, giving rise to the term lympho-angioma, is not alluded to by the author. The literary portion of the work is deserving of no small praise. Its brevity entices the reader, while its conciseness gives him an ample sketch of the subject treated. Although the American publishers' names are upon the covers, the clear type bespeaks its English origin.

FILTH-DISEASES AND THEIR PREVENTION.¹

THE report of Mr. Simon, of which we have here the reprint, has already received such an extended notice in the *JOURNAL*² that it is scarcely necessary to do more than to record our hearty appreciation of the spirit which prompted the State Board of Health to give to that valuable sanitary document an opportunity for wide circulation in this country. Mr. Simon is un-

¹ *Filth-Diseases and their Prevention*. By JOHN SIMON, F. R. C. S., F. R. S., D. C. L., Medical Officer of the Privy Council and Local Government Board of Great Britain. First American Edition, printed under the Direction of the State Board of Health of Massachusetts. Boston: James Campbell. 1876.

² Report on Recent Progress in Public Hygiene, September 30, 1875, page 387.

questionably in the foremost rank of sanitary authorities, and whatever issues from his pen is sure to carry great weight. His writings are characterized by a degree of deliberation and by a conscientious regard for the truth which stamp them as the work of a master. We most cordially commend the volume before us to the perusal of all who are interested in sanitary reform. This beautifully printed American edition is a timely reproduction of an exceedingly valuable contribution to the literature of public hygiene.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

EDWARD WIGGLESWORTH, JR., M. D., SECRETARY.

MARCH 6, 1876. *Arsenical Paper-Hangings*. — DR. F. H. BROWN read under this title the regular paper for the evening.¹

DR. A. H. NICHOLS thought that if sellers of arsenical papers were held responsible for all damage accruing from the use of such papers, it would equal the beneficial effects of a preventive law. Such a case is now on trial.

DR. LINCOLN exhibited a green tarlatan lamp-shade, and Dr. Brown stated that poisonous effects *within a few hours* had been reported as due to the use of such shades.

MR. S. P. SHARPLES, State Assayer, showed some arsenic-colored paper for confectionery. There was enough of the drug in a square inch of the paper to poison a child. Such paper is used for bonbons, for boxes, for wrapping lozenges, etc. It is perfectly possible to produce the same colors by other means, and in New York the sale of the arsenical colors has been forbidden by law. By the laws also of Massachusetts the sale of arsenic is forbidden, except upon the prescription of a physician, and all that is needed is an amendment to prevent the sale of such papers, namely, to punish such sale by a fine of not more than one hundred dollars, and the court to order the articles to be destroyed. Mr. Sharples added that Scheele's green (arsenite of copper) had not been in the market for over sixty years, the more brilliant aceto-arsenite having taken its place.

DR. CHADWICK held that carpets and ladies' dresses ought also to be included in Mr. Sharples's list, which was assented to by Mr. Sharples. Dr. Chadwick stated that out of all those specimens of the bluish slate color, at present in fashion, which had been examined by him, there was not a single one which did not contain arsenic, nor could he find in the whole city any such color which was not arsenical. He cited three interesting cases of exposure to the influence of arsenic. A yellow paper, upon the walls of the chamber of a pregnant lady suffering from dyspnea in paroxysms, was found full of arsenic. The paper was removed, and the patient speedily recovered without other treatment. In a second case, a lady was troubled with headache daily upon awaking in the morning; the wall-paper, which contained arsenic, was removed and the headache never returned. The third was a person who never showed any symptoms of poisoning although the wall-papers all showed,

¹ Published in this number.

upon testing, the presence of arsenic. The case was then cited of two ladies upon whose whole bodies an eruption appeared whenever brown, red, or blue stockings were worn. [A subsequent examination has shown that these stockings did not contain arsenic, and the eruption was therefore due to the presence of some other coloring matter.]

PROFESSOR WATSON had seen a case where the cutaneous eruption was the principal and almost the only symptom. The wall-paper was removed, and the patient rapidly recovered.

MR. SHARPLES spoke of a manufacturer of arsenical colors, who had to relinquish the business three weeks after undertaking it. His whole health had given way, and yet after leaving the manufactory he at once recovered.

DR. HILDRETH quoted Wood to the effect that arsenic is often found in the urine of acute cases of arsenical poisoning, but stated that he had had acute cases which did not show it.

DR. DRAPER considered preventive laws necessary. The workmen are often poisoned in paper manufactories, so that they even have their own name for the disease. Abrasions become ulcers; catarrh, diarrhœa, etc., occur. Dr. Draper quoted a case of two children, sleeping for months in a room with much arsenic loosely applied to the wall-paper, who experienced no evil effects.

DR. WIGGLESWORTH said that an excellent example of such ulcers could be seen in the Dermatological Cabinet of the Warren Museum at the Harvard Medical School. The patient entered the St. Louis Hospital in Paris for treatment, went out perfectly cured, returned to the same trade as before, working in arsenic, and within six weeks was obliged to reapply to the hospital for treatment, the hands and fore-arms being in the condition represented by the specimen of the disease referred to.

DR. JEFFRIES commented upon the fact that the inhalation of small amounts of arsenic should produce such effects, while the much larger amounts administered by the stomach do not, as the rule. Idiosyncrasies exist, and one patient of his had been poisoned by two drops of Fowler's solution, while others had by degrees reached doses of one and a half grains per diem. Dr. Jeffries regarded arsenical poisoning as more severe in its effects upon the system than is commonly supposed. There may be irritation of the whole intestinal tract, or complete prostration of the nervous system, or constant dyspepsia. One patient suffered from neuralgia and malaise on warm days, then gradually broke down, and severe dyspepsia set in. This condition passed slowly off, but even after recovery the patient seemed to break down more readily than other people, and from lesser causes than before the attack. Dr. Jeffries had known cases where the patient seemed never to outgrow the whole trouble; though the symptoms were relieved, there was yet perpetual malaise and exhaustion. The prognosis should therefore always be a guarded one.

MR. SHARPLES alluded to some cases of arsenic eating which had been investigated by Professor Clarke, where six grains of white arsenic were consumed daily, and the health of the consumers was disturbed only when the arsenic was discontinued.

DR. JEFFRIES had known as much white arsenic as would cover a five-cent piece to be taken at a dose.

In answer to Dr. Green, DR. FITZ stated that arsenic, like phosphorus, could in toxic doses give rise to acute nephritis.

DR. WIGGLESWORTH referred to some recent statements of Dr. Knapp before a meeting of German naturalists and physicians at Graz. Dr. Knapp himself saw a man, who had taken arsenious acid the day before, take four and a half grains, and also, on the following day, five and a half grains without injury. A director of an arsenic factory was said to have by degrees reached a dose of twenty-three grains. In Upper Styria, foresters, hunters, and others, even women, are addicted to this habit. They allege that it assists respiration, has an abortifacient action, protects from disease, and improves the personal appearance. Dr. Knapp saw a healthy man of seventy who had taken arsenic for forty years, and heard of one over eighty years of age. He met no cases where the health seemed to have been injured by the use of the drug. The largest dose Dr. Knapp had ever seen taken at one time was fourteen grains. The doses taken are small at first and increased by degrees. They are taken at intervals of from two days to a fortnight.

MR. SHARPLES submitted a project for obtaining legislative action in regard to restraining the sale of arsenical colors, and the society appointed Drs. Brown, Chadwick, and Draper a committee to agitate the matter.

Foreign Body in the Eye. — DR. WADSWORTH showed the specimen. A boy ten years of age, exploding a percussion cap by striking it with a stone, was struck by a fragment in the right eye. A week after the injury the eye was painful, with deep seated congestion around the cornea. There was a cicatrix near the centre of the cornea, some two lines long, to which the iris was attached, and the lens was cataractous. Enucleation was advised, but was not performed until three weeks later, the eye meantime continuing irritable and congested.

On opening the globe the vitreous was found to be almost wholly absorbed; the retina separated from the choroid by a bloody fluid, folded together, and attached only at the ciliary processes in front of the entrance of the optic nerve behind, and at a spot some three fourths of a line in diameter a little to the inner side of the nerve. The latter attachment was evidently of inflammatory origin and was in direct relation with the sclera as well as the choroid. The altered retina here for a distance of some one and a half lines had the appearance of a firm whitish cord around the attached end of which the choroid rose slightly to embrace it. The posterior surface of the sclera at this place showed a small darkish spot, where it was somewhat thinned.

A piece of copper percussion cap one line wide and two and a half lines long was inclosed loosely within the separated retina. From the appearances at the place of attachment of the retina and the position in which the copper was found, the latter must have penetrated to the rear of the eye, wounding the retina and choroid, partially perforating the sclera, and then rebounding into the vitreous. Subsequent inflammatory changes caused absorption of the vitreous and consequent separation of the retina, but before the retina became separated, exudation at the wounded point had firmly fastened it there to the sclera and choroid.

Poisoning from the Strong Tincture of Aconite Root. — DR. STEDMAN reported the case. It was due to the administration of one drachm of the strong tincture, the symptoms appearing within five minutes from the exhibition of the drug.

Poisoning from Quinine. — DR. J. J. PUTNAM related a case of poisoning from two to three grains of quinine. It occurred whenever the drug was administered. The symptoms were swelling of the lips and tongue, with redness of the face and neck.

Case of Abscess of the Brain. — DR. J. O. GREEN reported the case, but reserves it for publication.

DR. STEDMAN had seen a child suffering from chills, high fever, and severe shooting pains, suggesting the formation of pus (inside or outside of the skull uncertain), and had proposed opening the mastoid cells. It was not done, the child died, and the mastoid cells were found full of pus. This extended also down the sheaths of the jugular veins. He, with Dr. Bolles, had seen another case where the same symptoms were present. The mastoid cells were opened, no pus was found; the nearly moribund child died some two hours after the operation.

Case of Functional Disorder of the Brain. — DR. FISHER spoke of the difficulty sometimes experienced in distinguishing functional from organic cerebral affections. He mentioned the case of a lady who presented symptoms as follows: severe pain in sub-occipital region, which was temporarily relieved by massage at the hands of Dr. Graham; semi-consciousness and difficulty in expressing her ideas, and at times stupor; great debility and loss of locomotive power; closure of the left eyelids, with dimness of vision in left eye. There was at no time much fever, but a pulse ranging from 65 to 75 per minute. Temperature from $97\frac{1}{2}^{\circ}$ to 100° . Urine acid with heavy deposit of urates; no albumen. Tongue thickly coated at times, and occasional attacks of vomiting. There were evidences of a rheumatic diathesis.

A diagnosis was made of functional disorder due to long-continued anxiety, with increasing nervous exhaustion, and perhaps rheumatism affecting the membranes of the brain. Dr. Ellis confirmed this diagnosis, and the improving condition of the patient seems to justify it.

DR. LANGMAID referred to the efficacy of continued doses of iodide of potassium in the enlarged joints of rheumatism.

THE CATALOGUE OF THE NATIONAL MEDICAL LIBRARY.

MEMBERS of the medical profession who have not personally inspected them will find it hard to realize the importance and great value of two collections at Washington largely formed since the war. The Army Medical Museum, which owes its conception and growth to the intelligent labors of scientific men, members of the medical staff of the army, is second to none of its kind in the world, and the National Medical Library is surpassed by but very few in Europe.

The collection, hitherto known as the Library of the Surgeon-General's

Office, is very largely due to the labors of Dr. John S. Billings, U. S. A., under the direction of Surgeon-General Barnes. Peculiarly fitted for his duties by culture and inclination, as well as by his extensive researches in medical bibliography, Dr. Billings has accumulated at Washington a collection of which the medical profession may well be proud, and which will prove of inestimable value to those who desire to make careful investigations in medical science.

In 1865 the Library of the Surgeon-General's Office contained eighteen hundred volumes; in 1872 it had increased to thirteen thousand volumes, and now it numbers some forty thousand volumes and about the same number of pamphlets. It is essentially the medical section of the library of Congress. Large as this number may appear to those who are not familiar with the amount of literature on the subject, it is only about one half of what such a collection should contain in order to place the writers of this country in such a position as regards means of reference to the literature of medicine as it is desirable they should occupy.

In making this collection it has been the aim of the librarian to make it a thoroughly practical, working library. It is especially rich in works illustrating the history of medicine, in monographs on the various branches of medical science, in its files of periodicals from all parts of the world, and in pamphlets and monographs which all who are acquainted with bibliography know to possess equal if not greater value than more pretentious works.

To render this library available Dr. Billings, in 1872, issued in one volume, quarto, a catalogue of the works then in his charge, and another in 1874 in three magnificent volumes. Two volumes of the latter issue embrace a catalogue of authors, giving with the name of each a full title of each book; the third volume is devoted to those works issued anonymously, to transactions, reports, and periodicals. It is the present intention of the librarian to publish a catalogue in five volumes of one thousand pages each, which cannot fail to be of immense value to all who are interested in the advancement of medical literature, namely, to incorporate with the catalogue by authors one by subjects, giving reference not only to bound books on the various branches and their minutiae, but to separate articles in transactions of societies, in medical periodicals, and other publications. The value of such a collection can be appreciated by those who have examined the bibliography of cholera, drawn up by Dr. Billings and appended to the recent report on that disease issued by the War Department. It is sufficient to say that the librarian desires to do the same for the whole field of medicine that he has already accomplished for cholera.

A sample of the proposed work, entitled a Specimen Fasciculus of a Catalogue of the National Medical Library, under the direction of the Surgeon-General, U. S. A., at Washington, D. C., is now before us. It is but a specimen of what has already been done in manuscript, and which only awaits the proper appropriations to be put in print and placed in the hands of the medical men of the country. To the subject of the abdomen, for instance, thirteen quarto pages, much of it in fine print, are devoted under the sub-heads, abscess of, anatomy and physiology of, exploration of, etc., and in this list is included

nearly all that has been written on the subject, either in bound works or in the various periodicals.

Medical bibliography, we fear, can hardly be said to have made such gigantic strides in the past century as have been witnessed in the other branches of science and literature; but we have evidences all around us, in Germany, in England, and in our own country that it is taking a more important and honorable stand; and that writers and earnest, thorough students of medical lore are every year becoming more numerous and more persevering. Such men, and all who seek the true advance of medicine, must welcome the publication of a work which will lay open the field of medicine and the investigations which have already been made. It now becomes the duty of all medical men, the country over, to strengthen the hands of the surgeon-general and the librarian by assuring members of Congress, who will shortly be called on to make the appropriations, of the great value of the work which has already been done, and of the great advantage of opening more freely to the medical profession the stores of wealth which so important a collection as the National Medical Library offers.

MEDICAL NOTES.

—In a paper published in *The Clinic* of April 15, 1876, Dr. D. H. Jessup protests against the use of the abdominal bandage after delivery. Its advocates have recommended its use for the purpose of restoring and preserving the woman's shape, of affording a feeling of comfort, of preventing flooding, of promoting contraction of the uterus, of preventing after pains, etc. The writer affirms that no one of these purposes is accomplished; that the effect of pressure on the recently emptied and tender uterus is to produce irritation, and thereby excite after pains, so that often the patient loosens the bandage herself and thus lessens her distress. Another objection to the binder is that it disturbs the normal relations of the organs compressed. The compression also interferes to some extent with the process of uterine involution. For these and other reasons of a similar character the writer expresses the hope that the time is not far distant when the use of the obstetric binder shall be discontinued.

—In a lecture published in *The New Orleans Medical and Surgical Journal* for March, 1876, Dr. LeMonnier in answer to the question, "Have we a sure sign of death?" speaks as follows: The Marquis d'Ourches, a noble-hearted Frenchman (who had been twice very rich and once very poor), fully appreciating the gravity of *premature inhumations*, bequeathed the sum of 25,000 francs (\$5000) to be distributed as follows: 20,000 francs (\$4000) to the discovery of a sure and simple means of determining death; this means to be so simple that the *poor uneducated countryman might apply it*. The remaining 5000 francs (\$1000) to the discovery of scientific means.

The contest was open to the world. Contributions from candidates came, not only from Europe, but from the United States (Chicago), China, and Asia, showing how great was the interest taken.

The result was that the prize of five thousand francs for the discovery of

scientific means was divided as follows: five hundred francs (\$100) to the discoverer of the sign which consisted in the difference existing in the *canterization* of the pulp of the fingers during life and after death. During life blisters are formed, containing serosity; after death they contain steam. A second prize of five hundred francs to the discoverer of that *grayish* or *dusky* spot which shows itself prior to decomposition, first at the external portion of the sclerotic, prior to its total invasion. As positive a sign of death as this one is the *general discoloration of the fundus of the eye after death*. During life it is of a dark red color, and after death of a yellowish white. A third prize of two thousand francs to the author of researches made on the *livid patches* found after death. The author concludes that they are a sure sign of death, as they were found in every case on fifteen thousand cadavers. Another important fact is that they appear shortly after death. Finally, two prizes of one thousand francs each, for researches on the *temperature* after death. The lowest temperature compatible with life has generally been supposed to be a fraction over 54° F. (30° C.), until last year, when a woman was brought to the Pitié Hospital (Paris), in the wards of Dr. Michel Peter. She was frozen unto death, with a temperature of 46° 8' F. (26° C.) only, and yet by artificial heat she was recovered. This is the only case on record with such a low temperature where life was saved.

No one proved competent enough for the prize of 20,000 francs. Professor Weber, of the chair of medical jurisprudence at Leipsic, obtained a very honorable *mention* for his easy means of recognizing death. His theory was, that if a few hours after death any portion of the skin was rubbed with a wet brush, it infallibly assumed a parchment-like appearance. He reported this as an infallible means of recognizing death; unfortunately it did not prove to be so in the hands of the judges, or he would have obtained the 20,000 francs prize.

This does not mean, gentlemen, that prior to this competition no positive signs of death existed. We have many of them, too numerous to be mentioned here.

— In a recent number of the *Lancet* Dr. David Ferrier makes an interesting communication on How to Cure a Cold in the Head. Recognizing the favorable action of bismuth in gastric catarrh, he conceived the idea of employing this remedy in the form of snuff for the relief of the symptoms of coryza, to which malady he is a frequent victim. He uses a powder composed of the following ingredients: hydrochlorate of morphia, two grains; powdered acacia, two drachms; trisnitate of bismuth, six drachms. On the appearance of the first symptoms of a cold in the head he uses the powder freely applied to the nose like a pinch of snuff. The remedy has never failed to relieve him completely within a few hours, and several of his confrères who have tried it speak warmly in its praise. The powdered acacia serves not only as a vehicle for the other ingredients, but forms a coating to the Schneiderian membrane, contributing greatly to the relief of the irritation.

— Dr. Richardson, says *The Medical Press and Circular*, of April 5, 1876, recently delivered a lecture on the Mosaic Code and Vitality. Some curious statistics were brought forward. In Prussian Germany still-born children

numbered one in ninety-seven Jews, forty-seven Catholics, and forty-two Protestants. Half the Jews at Frankfort reached fifty-three years; half the Christians succumbed at thirty-six. Three reasons had been assigned for the high vitality of the Jews: (1) an innate excess of vital resistance; (2) the observance of the rules of health laid down in the Pentateuch; (3) the Jews have followed, either under the influence of necessity or from natural prompting, a better life in all that relates to the maintenance of a healthy physical existence. There was no physical or anatomical superiority of the Jews over other races. In some respects they were inferior to Saxons and Celts, but they had less hereditary tendency to diseases such as scrofula, consumption, and rheumatism. Coming to the second cause, the influence of the Mosaic sanitary code could scarcely be overrated, and its provisions formed a marvelous collection of sanitary rules.

A great advantage was doubtless gained in the early ages by abstaining from the flesh of animals which fed on garbage, and at the present time those who strictly adhere to the principles of their religion refuse to touch food which may by any possibility be diseased or decomposed; whilst such food is freely partaken of, or even sought for on account of its cheapness, by the lower class of other persuasions. On this score alone a large number of young Jews who would otherwise succumb to diarrhœa and its effects live to swell the number of those who lived beyond the fiftieth year.

Among the causes of the third category Dr. Richardson mentioned the comparative immunity from hard physical labor. He referred also to their ablutions and habits of cleanliness entailed upon them by their religion. In the matter of cleanliness, however, the lowest classes of Jews are little if any better than their neighbors.

There appear to be these causes for the longevity of the Jews: (1.) Abstinence from decomposing food. (2.) Abstinence from alcohol. (3.) Freedom from syphilis. This freedom from syphilis may in great part account for the rarity of abortions and still-born children among the Jews.

BOSTON CITY HOSPITAL.

MEDICAL CLINIC.

[SERVICE OF DR. HALL CURTIS.]

Typhoid Pneumonia. — I. E. S., domestic, twenty years old, entered hospital February 17, 1876. Mother died with phthisis. Patient always well till one week ago. Since then has felt weak, with pain and soreness in bones. No appetite. Took to her bed yesterday. Now complains of severe headache and pain in left breast; sleepless; no cough. Temperature 99.9°; pulse 92; respiration 54.

February 18th. Dyspnœa well marked. Physical examination shows flatness over left lower lobe; bronchial breathing, and fine crackling râles throughout area of dullness. Cotton jacket. Ten grains of Dover's powder at night. A. M. Temperature 99°; pulse 92; respiration 55. P. M. Temperature 100.8°; pulse 108; respiration 37.

February 19th. Slept well. Less dyspnœa. A. M. Temperature 99.2° ; pulse 88; respiration 33. P. M. Temperature 99.5° ; pulse 82; respiration 20.

February 20th. Dullness over lower half of left lung. Bronchial respiration. No râles. Face livid. A. M. Temperature 98.2° ; pulse 75; respiration 18. P. M. Temperature 99.6° ; pulse 113; respiration 28. Four drachms of brandy and one ounce of soda-water every hour; if pulse flags, five grains of carbonate of ammonia as occasion requires.

February 22d. Temperature 98.5° ; pulse 100; respiration 24. P. M. Temperature 98.5° ; pulse 93; respiration 22. Complains of pain in right thigh. Sleepless night; profuse perspiration; irritable stomach. Brandy omitted. Milk diet and wine whey.

February 24th. Feels better and looks so. No cough. Tongue cleaning. Slight dullness; diminished respiration; no râles. The temperature is, however, A. M., 100° ; P. M. 100.2° .

February 25th. Headache. Guarana, thirty grains.

February 29th. Headache continues. Temperature: A. M. 99.5° ; P. M. 100° .

March 2d. Respiration clear through back. Headache persistent. Patient weak. One grain of quinine three times a day. Temperature: A. M. 99° ; P. M. 99.5° .

March 4th. Headache still continues. Temperature: A. M. 101° ; P. M. 102.5° . Mustard to nape of neck.

March 5th. Temperature 101° . At 3.30 P. M. sharp epistaxis came on, but was checked. It recurred violently at 6.30 P. M., when ergotine was injected subcutaneously, and the nares were plugged anteriorly and posteriorly. Free vomiting, and purging of blood. She was delirious, tossing in bed, refusing stimulants by mouth and unable to retain them by the rectum. Brandy was repeatedly injected under the skin, but reaction did not take place, and she died at 1.45 A. M.

II. F. W., twenty-eight years old, laborer, entered hospital March 2d. Has a family history of phthisis and heart disease. Always healthy till present sickness. Three weeks ago was exposed to cold; had rigors, followed by sharp pain over chest. Has had diarrhœa for some days, with dyspnœa, cough, and scanty expectoration. He complains of pain at ensiform cartilage and over right chest.

March 3d. Physical examination; no perceptible difference on percussion. Mucous râles base of left back. Tepid sponging and the following mixture, one drachm three times daily (the hospital fever mixture):

R̄ Liq. ammoniæ acetatis,
Spts. etheris comp.,
Spts. etheris nitrici āā ʒ i. M.

Temperature: A. M. 103.5° ; pulse 108; respiration 33. P. M. Temperature 105.2° ; pulse 114; respiration 28.

March 4th. Severe pain, extending from ensiform cartilage to right axilla. Delirium and severe diarrhœa. Omit fever mixture. Three ounces of brandy three times daily. Five grains of quinine three times daily, in injections of starch and opium.

March 6th. Dullness. Bronchial breathing and subcrepitant râles through

right front and back. A. M. Temperature 104.8° ; pulse 120; respiration 38. P. M. Temperature 104.6° ; pulse 112; respiration 40.

March 8th. Weaker. Subsultus. A. M. Temperature 102.8° ; pulse 125; respiration 44. P. M. Temperature 105° ; pulse 133; respiration 49. Died 10.45 P. M.

III. H. J., twenty-three years old, hack-driver, entered March 7th. His family history is good. He has usually been in very good health, though he had an attack of pneumonia when young. He has a strong physique, but during the winter has been much overworked. Three weeks ago he took cold, and cough became troublesome; this has much increased during the past few days, with viscid, blood-stained sputa. Any exertion is followed by epistaxis. Pain in right side and back is severe, and increased by pressure. Constant headache, with delirium. P. M. Temperature 104° ; pulse 108; respiration 44. Ordered milk diet, sponge bathing, and the hospital fever mixture, one drachm three times daily.

March 8th. Want of tone through right front. Sibilant râles through right front and both backs. A. M. Temperature 102.8° ; pulse 116; respiration 44. P. M. Temperature 103.8° ; pulse 124; respiration 38.

March 9th. Right front tympanitic, with crepitant râles in lower third. Right back dull, with bronchial respiration, sibilant and occasional crepitant râles. A. M. Temperature 103° ; pulse 111; respiration 32. P. M. Temperature 103.2° ; pulse 116; respiration 32.

March 10th. A. M. Temperature 102° ; pulse 112; respiration 30. P. M. Temperature 105.5° ; pulse 114; respiration 40. Delirium and jactitation. Takes milk very freely.

March 11th. Had a better night. A. M. Temperature 98.6° ; pulse 84; respiration 24. P. M. Temperature 97.8° ; pulse 88; respiration 26.

March 14th. Improvement continued. Respiration now normal.

April 6th. Discharged, well.

IV. W. D., twenty-four years old, teamster, entered March 8th. He has always been well till two weeks ago, when, after exposure, cough came on, without expectoration, accompanied with severe pain in chest. Four days ago he awoke with severe headache and pain all over body, with rigors and vomiting. The cough increased, with thick, bloody expectoration and dyspnoea. He now complains of pain in left chest on full inspiration. Cough not very severe. Face flushed. Skin hot and dry. No appetite. Constipation. P. M. Temperature 103.2° ; pulse 94; respiration 28.

March 9th. A. M. Temperature 100.8° ; pulse 90; respiration 26. P. M. Temperature 104.1° ; pulse 100; respiration 28.

March 10th. A. M. Temperature 102.6° ; pulse 100; respiration 30. P. M. Temperature 103.4° ; pulse 108; respiration 36. Dullness in lower half of left back. Bronchial respiration; subcrepitant râles. Expectoration abundant, viscid, of greenish color. Flaxseed jacket-poultice covered with oiled silk placed around chest; changed night and morning. Dover's powder, ten grains, at night. One eighth of a grain of tartar emetic three times daily.

March 11th. Delirious during night. Diarrhoea. Omit antimony. Three ounces of brandy three times daily. Milk diet. He complains of the poultice, which is changed for a jacket of cotton batting. A. M. Temperature 99.8° ;

pulse 120; respiration 28. P. M. Temperature 101.4°; pulse 120; respiration 32.

March 13th. Vigilance and delirium. Great prostration. Five ounces of brandy three times daily. Five grains of carbonate of ammonia three times a day.

March 14th. Frequent dejections. Rectum to be washed out, followed by enema of starch and opium after every second dejection.

March 26th. There has been steady improvement since the 14th. There is still comparative dullness in lower half of left back, with respiration somewhat bronchial, and subcrepitant râles. A. M. Temperature 98.2°; pulse 75. P. M. Temperature 102.8°; pulse 128.

March 27th. Patient sat up five minutes. Had a severe rigor, from which he slowly reacted with stimulants. A. M. Temperature 99°. P. M. Temperature 99.3°.

March 28th. Very bad night. Frequent vomiting this morning. Stimulants omitted. Milk and lime-water diet. A. M. Temperature 105.2°; pulse 140. P. M. Temperature 97.5°; pulse 88.

March 29th. Pain severe in right chest. Temperature: A. M. 98.5°; P. M. 101°. Respiration normal.

March 30th. Temperature: A. M. 98°; P. M. 105.5°. Rigor in afternoon.

March 31st. Heart and lungs normal. Two grains of quinine three times daily. Liquid food and sherry wine. Temperature: A. M. 102.5°; P. M. 97.8°.

April 1st. Severe rigor this afternoon, followed by vomiting and great distress at epigastrium. Temperature: A. M. 100.5°; P. M. 103.4°. Quinine increased to eighteen grains daily, the last dose given six hours before time of expected rigor.

April 5th. No rigor till yesterday. Temperature: A. M. 98°; P. M. 98.7°.

April 8th. Diarrhœa of yellowish and offensive character. Pain in ileo-cæcal region. Breath very fœtid. Tongue coated and dry. Lungs normal. Now dull and sleepy. Temperature: A. M. 98°; P. M. 99.2°.

April 9th. Delirious at times. Passes his water in bed. Temperature: A. M. 97.7°; P. M. 97.7°.

April 10th. Gurgling and tenderness in ileo-cæcal region. Otherwise no change. Temperature: A. M. 98.2°; P. M. 99.6°.

April 11th. Dyspnœa. The right chest was found entirely dull, with bronchial respiration. Dullness through right back, with bronchial breathing in upper three fourths. Lower half left back coarse mucous râles. The extremities were cold. The patient evidently sinking fast. Temperature 95.8°; pulse 108; respiration 28. He died in the afternoon. No autopsy.

V. F. A. M., forty-five years, teamster, entered March 10th. Twenty years ago he had erysipelas and pneumonia. Otherwise healthy. Five days ago he had a severe chill, with pain in back and chest. Cough began that evening, and has continued, with little expectoration, but severe dyspnœa. Two days before entrance he was seized with a violent headache and diarrhœa. P. M. Temperature 103°; pulse 120; respiration 48.

March 11th. Lower half of right back dull, with bronchial respiration and

broncophony, with occasional crepitant râles on full inspiration. Diarrhœa continues, with tenderness in ileo-cæcal region. Jacket poultice.

℞ Pil. opii gr. i. To be taken after every third defecation.

Milk diet. A. M. Temperature 101.6°; pulse 104; respiration 32. P. M. Temperature 100.8°; pulse 112; respiration 36.

March 13th. Cotton jacket. Diarrhœa ceased. A. M. Temperature 98.8°; pulse 84; respiration 32. P. M. Temperature 99°; pulse 80; respiration 24.

March 17th. Dullness much less. Occasional subcrepitant râles.

March 26th. Slight want of tone at base of left back. Respiration normal.

April 6th. Discharged, well.

VI. M. A., nineteen years, laborer, entered March 20th. Previous health good. Six days ago he took cold after exposure, followed by severe chill. Four days before entrance dyspnoea appeared, with cough and bloody expectoration. Now there is want of tone through lower half of left back, with bronchial breathing and coarse crepitant râles. Diarrhœa and epistaxis. Temperature 99.4°; pulse 100; respiration 54. One drachm of fever mixture every four hours. Ten grains of Dover's powder at night. Milk diet.

March 26th. Delirium at night, and occasional attacks of diarrhœa have occurred since last record, but with constant improvement. The temperature is now normal. Appetite improving. The respiration is still somewhat tubular over base of lung, with subcrepitant râles.

April 10th. Condition has constantly improved. Is now well.

VII. M. D., twenty years, laborer, entered March 28th. Always well and strong till two weeks ago, when he took cold, followed by pain and stiffness in joints. Three days ago was seized with severe headache, distress in chest, and cough. P. M. Temperature 103.5°; pulse 124; respiration 40.

March 29th. Delirium during night, with frequent diarrhœic discharges. Is now agitated, frequently screaming. There is tenderness and gurgling in the right iliac region. The chest is very sensitive. Relative dullness through right side, front and back, with occasional crepitant râles in upper third right front. Bronchial breathing in upper half right back, and crepitant râles. At base respiration is distant. A. M. Temperature 104°; pulse 116; respiration 44. P. M. Temperature 104.2°; pulse 116; respiration 40. Three grains of quinine three times daily. Ice bag to head. Milk diet. Tepid sponging.

March 30th. Want of tone in upper third right front, with crepitant râles throughout the area of dullness. Left front, respiration puerile. Dullness upper half right back, with marked bronchial breathing and broncophony. A. M. Temperature 104.2°; respiration 42; pulse 112. P. M. Temperature 104.2°; respiration 40; pulse 120. Jacket poultice. Dover's powder, five grains three times daily.

March 31st. During night diarrhœa again troublesome. Sputa now deeply stained with blood. Continue treatment, with starch and opium enemata. A. M. Temperature 102.4°; pulse 112; respiration 36. P. M. Temperature 104.5°; pulse 132; respiration 48.

April 4th. There has been a constant improvement since the last record. Temperature is now normal. Appetite good.

April 5th. Complains of sharp pain in right side of abdomen. Want of tone over right front; bronchial breathing at base. Want of tone over right

back, with pleuritic rubbing at base. A. M. Temperature 100.4°; pulse 88; respiration 28. P. M. Temperature 101.5°; pulse 85; respiration 30.

April 20th. Patient has constantly improved since the 5th. Temperature is normal. The respiratory sounds are now quite distinct and natural in right lung. Discharged, well.

VIII. T. C., age thirty-four, teamster, Maine, entered April 10th. Mother died with phthisis. He has always been healthy and strong, but has had several attacks of rheumatism. Four weeks ago was attacked with rheumatism; both knees, ankles, and left wrist were affected. One week ago, the rheumatism having nearly disappeared, he was sitting out in the sun, when he had a rigor. This has reappeared daily till entrance.

During the past week he has had frontal headache and several attacks of epistaxis. Frequent vomiting, with one or two loose dejections daily. Has had a cough for two weeks. P. M. Temperature 102.4°; pulse 112; respiration 32. Was sent to the hospital as a case of typhoid fever.

April 11th. A. M. Temperature 101.3°; pulse 128; respiration 40. The abdomen is not full nor tender. There is no gurgling in the ileo-cæcal region. Dullness over the whole of right front, with bronchial breathing, and at times a sibilant râle. Dullness over entire right back, with marked bronchial breathing over upper two thirds. Subcrepitant râles in lower third. Sputa viscid, tinged with blood. Jacket poultice to chest. Body sponged with tepid water twice daily. Milk diet. Brandy, one ounce, three times daily.

R̄ Dover's powder, gr. v., every four hours.

R̄ Quinæ sulphatis, gr. iij., every four hours.

April 12th. A. M. Temperature 99.8°; pulse 95; respiration 40. P. M. Temperature 101.5°; pulse 126; respiration 46.

April 13th. Slight epistaxis this morning. Right lung flat from nipple to clavicle, with bronchial respiration and bronchophony, with coarse crepitation on inspiration. A. M. Temperature 99.4°; pulse 111; respiration 33. P. M. Temperature 99.3°; pulse 123; respiration 32.

April 15th. Has taken milk very freely since entrance, and has improved till to-day, when he seems sicker. A. M. Temperature 102°; pulse 106; respiration 35. P. M. Temperature 102°; pulse 120; respiration 38.

April 16th. Left side of face is very much swollen, pitting deeply on pressure. He slept well last night. Passed a loose dejection in bed. Dullness, bronchial respiration, and subcrepitant râles through right front. Poultice to face. A. M. Temperature 98°; pulse 123; respiration 36. P. M. Temperature 101.5°; pulse 140; respiration 36.

April 17th. Six diarrhœic discharges since yesterday. Face is more swollen. He is dull, though rational. A. M. Temperature 99.6°; pulse 123; respiration 36. P. M. Temperature 100.2°; pulse 146; respiration 47. Brandy, nine ounces, during the day.

April 18th. Face more swollen. Exploratory incision did not find pus. Diarrhœa continues. Patient became weaker, and died.

All the cases of pneumonia, excepting two, that have entered this service during the past eight weeks, have presented typhoidal symptoms. During the same period hemorrhages have been markedly frequent, no matter what the primary disease may have been.

HALL CURTIS, M. D.

LETTER FROM ROME.

ROME AND THE TIBER.

MESSEURS. EDITORS. — Conspicuous among the natural hindrances to the well-being of Rome are the inundations of the Tiber, which have for ages brought upon the city periodical visitations of terror and misery, and which little or nothing has ever been done to prevent or alleviate. Unhappily for the present government, its advent in Rome was quickly succeeded by one of the most destructive of these floods that had been known for centuries, and their duties and responsibilities towards the capital in this matter were impressed upon the ministry with a force that could not be ignored. The Tiber has never been a beneficent stream, and the prayers of the Romans of old were far more frequently addressed to avert the wrath of a malignant deity than to offer pæans of praise for gracious favors. Nor did nature endow it with winning attributes or features pleasing to the eye. In spite of the halo cast about it by the melodious raptures of poetry and ages of song and story, in our day the ordinary vision sees but little to wing the pen or excite the lyre. At times sluggishly dropping from level to level of diluted mud, and insidiously undermining either shore, unnavigable and undrinkable, it finally taints the blue of the Mediterranean far out into its depths. At times rising suddenly in turbulent and tumultuous wrath, restrained by no limits, it deals in every direction unstinted havoc and desolation, and covers the streets of Rome with the plunder of the Appenines. From the earliest records it has been an object of dread, and the historians of every reign have borne graphic testimony to its ravages. During the old Roman supremacy these were far more destructive than in modern days, and while perusing the stirring details transmitted by Dion Cassius, Tacitus, and the younger Pliny, one is forced to the reflection, if all the power of the empire in its prime, with boundless command of men and treasure, could do absolutely nothing to curb the encroachments of the Tiber, what can be expected from a kingdom in its infancy, of limited resources, and with unnumbered demands from every quarter for aid which cannot be refused?

The origin of these floods is to be sought in an unfortunate union of unfavorable conditions, and is due partly to the position of Rome, partly to changes for the worse caused by the hand of man, and partly to the peculiar characteristics of the river. The site originally chosen was in places low and marshy, and for this disadvantage there would appear to be no remedy but that which has gradually developed itself in the rise of the modern capital to a higher and safer level, many feet above that of the Imperial City on whose decaying ruins it has been built. To this it is largely owing that the inundations of later times have been less widely extended than those which preceded them.

Among the changes resulting from human agency a significant rank is held by the barrenness of the hills and mountain slopes among which the Tiber takes its rise, and which ages ago were stripped of the trees and shrubs whose roots once absorbed a portion of the heavy and torrential rains, while they allowed the rest to find a quiet and gentle outlet into their natural channels. These waters, being now unrestrained, gather quickly, like warring squadrons, and, acquiring fresh force with every movement, rush on with irresistible im-

petus. Could these sterile declivities be now clothed with vegetation, slowly though it might done, an ever-increasing and ultimately permanent remedy would be provided, and that without great expense or danger of loss. Trees are everywhere the peacemakers of the earth, and it is their mission to temper the more fiery moods of nature. They extort melodious praise from elemental discord, and transmute black and impending clouds into green and dewy fragrance. Nowhere is their beneficence more apparent than when checking the flow of mighty waters.

It will, of course, be seen that this relief, though promising well for the future, offers but a doubtful security against the pressing perils of the present. Chief among these is that arising from the slight fall of the Tiber, which from many miles above the capital descends to the sea at the rate of only eight inches to the mile, and thus renders any rapid rise of its waves more and more unable to find an outlet. Under these circumstances the influence of the Mediterranean is quickly felt at Rome, and a flood needs but to happen at the same time with a high and adverse wind in order to drive back the swelling turmoil with fatal effect. This combination, fortunately, seldom happens, though it did occur at the advent of Victor Emmanuel, whose troops had hardly located themselves in Rome, in September, 1870, when in the following December came the terrible deluge, and the resources and abundant charities of the whole nation were applied for the relief of unwonted distress.

Naturally enough this disaster was the source of many specious plans to prevent its repetition, and a commission of able engineers was soon appointed to select one which might be both practicable and effective. The members of this profession in Italy are known to be among the most skillful in the world, and few excel them in all that concerns the regulation of water in motion; but it was to the patriotism and intelligence of Garibaldi, and his eagerness to add one of the victories of peace to those which he had already gained in war, that was due the most popular and promising of all the schemes suggested. This embraced not only the relief of the city from floods, but a more direct communication between it and the sea, where a new harbor would be founded which would rapidly develop its increasing trade and commerce. This plan was to be consummated through the agency of a broad canal which was to intercept the course of the Tiber at some distance above Rome, and thence be conducted to Fiumicino on the edge of the Mediterranean, partly by the reopening of another canal, now fallen into decay, which was made for a similar purpose during the reign of Claudius in the middle of the first century. Of this auspicious design there is no room here to give the details, which are fully set forth in Garibaldi's appeal in its behalf to his countrymen, or, more correctly speaking, to the world. That it will ever be carried into execution there is, unhappily, little hope. Apart from other considerations, the cost alone would offer an obstacle of the most formidable kind. The original estimates were sixty millions of francs, and this amount would in all probability be increased to at least a hundred by the time the works were finished. Even the wealthiest nations would hesitate at such an expenditure, and still more Italy, where the pressure of taxation is already enormous, while the increase necessitated by such an undertaking would be intolerable. Under this aspect few would hastily blame even

the victims of the Tiber from bearing the ills they have, rather than fly to others that they know not of. Surely this would be the true philosophy.

If we leave pecuniary disabilities out of the account, however, Garibaldi's device is dubious under every aspect, and even his warmest admirers are constrained to admit that its benefits would be uncertain as to their immediate effect, and still more so in the future. Any works designed to divert from such a capricious stream as the Tiber the enormous volume of water that may accumulate in a few hours must not only be of vast size and cost, but even then it would be very doubtful if they could accomplish what was expected of them. The onward rush of a swollen river is one of the most majestic and untamable forces of nature, and it is precisely at the moment when structures built to resist this are the most needed that they are the most powerless. A gradual rise might be as gradually mitigated, but the impetuous pressure of sudden fury scorns all restraint. The truth of this was tested by the old Roman method of dealing with the evil to which allusion was made above, and "the conservators of the bed and shores of the Tiber" had little reason to consider their faith as justified by their works. And the results would doubtless be the same as to Garibaldi's canal. In the matter of the projected port it is not difficult to comprehend that however creditable to the ambitious pride of a patriot or the energy of a countryman of Michael Angelo and Leonardo da Vinci, it must be regarded as hardly practicable. It should be remembered that Rome is no longer the city of the Caesars, the nucleus of a boundless empire, exacting tribute from the whole world, nor is it even the thrifty centre of a prosperous community. Living on the hoarded grandeur of the past, hardly yet emerging from the decay of ages, with the desolation of eternal solitude stretching from it on every side, there is no trade to support, nor production to attract, an extensive commerce, nor can there be for many a generation. And even did the harbor which Garibaldi so enthusiastically forcees spring into existence, his canal would but hasten its destruction ere it were well finished. The Tiber holds in solution an immense quantity of alluvium which it deposits incessantly on every available spot, and the water drawn off by this means would not be slow to fill up the intended port with ever thickening strata of mud and refuse. Thus it was in the time of Claudius, whose new canal so speedily ruined his harbor that Trajan was obliged to abandon it within sixty years from its completion, and found a second nearer the sea, considering this more politic than to wage an endless warfare with the Tiber and carry on forever the repairs and dredging which had been inevitable from the first.

From these few suggestions, cursory and imperfect as they are, it will easily be seen that the difficulties in the way of moderating the encroachments of the Tiber are many and great, and history would warrant us in drawing the conclusion that every effort towards this end must eventually be futile. All experience goes to prove that a river is a terrible foe to deal with, whose rapacity is exorbitant, and whose apparent conquest but reveals fresh resources and fresh attacks under unsuspected shapes. It is the tendency of every stream to follow the course laid out for it from of old, and to return to its normal state after every human interruption. No lasting change can be impressed upon it except by the recurrence of one of those mighty convulsions which attended

its birth. Should the attempt be made to deepen its bed, the *débris* borne down from the mountains soon obliterates all trace of man's handiwork and restores its former level. Should it be widened on either shore, black and barren banks of slime left by its subsidence swelter in the sun for three fourths of the year, breeding vermin and malaria. Thus it would certainly be with the Tiber, and the commissioners appointed to control its vagaries will do wisely to undertake none of those stupendous projects which even the might of their predecessors failed to achieve with success. In all probability they will do nothing more than to recommend the erection of walls and quays along the more exposed localities and the removal of numerous obstructions which time and decay have left in the channel, and which, though not very important, yet offer a certain check to the course of the current. Among these are the remains of the piers that supported the Sublician Bridge in those grand and ancient days when the unaided valor of one man thwarted the progress of an army and secured for Horatius Cocles that fame which envious oblivion yields to none but the greatly daring.

A.

ROME, March 31, 1876.

MESSRS. EDITORS, — In the medical notes of May 4th, you announce a method of treatment for prurigo (pruritus?) senilis. As this form of pruritus is apt to affect large districts of the skin and to be marked by numerous excoriations, will you inform us if it be safe to "smear the surface with citrine ointment" as generally and frequently as may be required to permanently control so stubborn an affection?

BOSTON, May 5, 1876.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held on Monday evening, May 15th, at eight o'clock, at the hall in Temple Place. Subject of the paper to be read by Dr. T. B. Curtis will be Two Cases of Lithotripsy.

BOOKS AND PAMPHLETS RECEIVED. — Diseases of the Skin. By Henry G. Piffard, A. M., M. D. With Illustrations. London and New York: Macmillan & Co. 1876.

Proceedings of the Medical Society of the County of Kings. Brooklyn, N. Y., May, 1876.

On the Treatment of Chronic Eczema by Glycerole of Subacetate of Lead. By Balmanno Squire, M. B., London. (Reprinted from the Medical Times and Gazette.) 1876.

Ninth Annual Report of the Board of Health to the City Council of the City of Dayton, for the Year ending February 29th, 1876. Dayton, Ohio.

Laceration of the Soft Parturient Passages. By M. F. Bridgman, M. D. Boston. 1876.

Seventh Annual Report of the State Board of Health of Massachusetts. (Advanced copy.)

Fifth Annual Report of the Trustees of the City Hospital at Worcester, for the Year ending November 30, 1875.

De la Valeur de l'Hystérotomie dans le Traitement des Tumeurs fibreuses de l'Utérus. Par Dr. Samuel Pozzi. Paris: Masson. 1875.

The Pathology and Treatment of Childbed. By Dr. F. Winekel. From the Second German Edition. Translated by James R. Chadwick, M. D. Philadelphia: Henry C. Lea. 1876.

MILITARY APPOINTMENTS. — The following commissions have been issued from the office of the adjutant-general the past week: Reappointments under act of 1876, from April 29th. First corps of Cadets, major and surgeon, William L. Richardson, of Boston; Second corps of Cadets, from May 3d, major and surgeon, William F. Southard, of Templeton.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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A CASE OF EXTRA-UTERINE PREGNANCY.¹

BY MARTIN A. TINKER, M. D., BROOKLYN, N. Y.

Mrs. E., born May 24, 1840, in Pennsylvania, nervo-sanguine temperament, blonde complexion, light-brown hair, and blue eyes, had good health in youth, began to menstruate at the age of fourteen, and continued to do so without pain or irregularity until after marriage.

She was married October 24, 1859, and had a miscarriage between four and five months afterwards, flowing very profusely at the time; she rapidly recovered, and after three months menstruated again, and continued to do so regularly until about the 20th of December, 1869, when she became pregnant.

In the latter part of February, 1870, she was threatened with a miscarriage, accompanied with severe uterine pains and profuse hæmorrhage. This state of affairs continued for nearly three weeks, reducing her very low, and was characterized by the most intense expulsive pains, followed by and at times accompanied with prolonged fainting spells, lasting perhaps for hours. No one who saw her thought it possible for her to recover. These symptoms defied all kinds of treatment, but finally were relieved by electricity.

It was considered, by all the physicians who saw the case, a miscarriage, on account of the size and quantity of the clots passed, as well as the general subsidence of pain after this period. There had been considerable irritation of the stomach, which after this time was much less, although it continued for a month or two longer.

She gradually regained her usual health, so that in April she expressed herself as "never feeling better," although rapidly increasing in size and very much annoyed by the excessive viability of the fœtus.

Up to this time she resided in Elizabeth, N. J., but on the first of May, 1870, she removed to Brooklyn, N. Y. She was not sick an hour during the summer, nor until September 10th, when severe uterine and abdominal pains supervened, and a physician was called, who, after having made an examination, remarked that there was no particular indication requiring his immediate attention, gave an anodyne, and re-

¹ Read before the New York Obstetrical Society, March 21, 1876.

tired. After this she had more or less contractile pains, at times very severe.

September 20th, severe labor-like pains came on, increasing in intensity during the morning, afternoon, and evening, until they became almost unbearable, and yet not accomplishing anything, as remarked by the attending physician.

The pains continued until late in the afternoon of the 21st, when they began to abate, and by midnight had nearly subsided; they ceased entirely before morning.

On the morning of the 22d a very peculiar discharge from the uterus commenced, consisting of a fleshy substance and clot-like portions of a disorganized placenta; this continued quite profusely for a few days, when the discharge, gradually diminishing, became very offensive, and at length almost intolerable. This discharge continued nearly three months, though gradually diminishing.

The fœtus, from its first period of viability, which occurred about the fourth month of utero-gestation, to the 20th of September, was unusually active, presenting a characteristic width rather than prominence, so much so that it was thought there were twins. After September 21st there was no motion whatever. The milk-fever occurred on the 25th and 26th, followed by a most abundant secretion, which it required a long time to suppress. The patient remained very weak and exhausted for several months.

There was no perceptible diminution in size before February, 1871, when absorption gradually began to take place, and in the latter part of May a portion of the fœtus, probably an elbow or knee, became very prominent in the left abdominal region, about four inches above and to the left of the umbilicus; this became so annoying that a consultation was held early in June. An examination of the uterus was made with the sound, and found empty, and the prominence pronounced an encysted tumor. There was no pain in the abdomen at this time, neither had there been any since the 22d of September, 1870. At this time absorption had reduced the patient to about the size of a six or seven months' pregnancy. The menses had reappeared in May, and continued regularly until February, 1873, a period of two and a half years. Now, after missing two months, she took some emmenagogue remedies, which induced an abundant flow, and for a few days it was accompanied with severe uterine pains; these subsided, but the flow, gradually diminishing, continued for some time, she really thinking that she had a miscarriage at this time, it so resembled her former miscarriage. During the period that her menses were regular, from May, 1871, to February, 1873, she enjoyed her usual good health, and attended to her customary duties.

Early in May, 1873, the case first came under my observation. I found her keeping her room, and the bed most of the time, as she was very

weak from the long-continued discharge above referred to. The discharge disappeared under treatment in about two weeks, while her strength only partially returned, with a very fair appetite. About two weeks after the uterine discharge had disappeared, a moderate diarrhœa supervened, which gradually increased, while it became peculiarly offensive. All symptoms became aggravated quite regularly about every four weeks, and then would mostly subside during the interval. The appetite became very fair, the general health improved somewhat, and she again became what one would call a very comfortably sick patient. When on her feet for some time, or walking any considerable distance, her feet and ankles would become œdematous, as is usual with pregnant women.

After the middle of June I saw her only occasionally, she being very comfortable, and residing some distance from me. On the 13th of July, 1873, while visiting the stool, she perceived some large foreign body passing from her *per anum*, which proved to be the left lower extremity of a full-grown fœtus, firmly adherent to its ossa innominata by its ligaments, while the flesh was decomposed and gone from the ossa innominata and from the knee downwards. On the section from the hip to the knee the skin and flesh were *in situ*, presenting the section of the limb of a full-grown fœtus. Before my arrival several other pieces of bones, etc., had passed, but were not saved.

On making an examination *per vaginam* I found the parts healthy, the uterus pressed downwards and forwards somewhat, with some little anteversion, and not much larger than the virgin uterus. The os retained its relative position, but was slightly tilted backwards. The bladder was pressed forward, and the head of a full-grown fœtus was felt posteriorly, resting upon the fundus of the uterus.

On examination *per anum* I found a vertex presentation of the head, rather posterior to the fundus of the womb and above the recto-vaginal sulcus, and some four or five inches above the anus there was an opening into the abdominal cavity about three inches in diameter, through which portions of the fœtus could be distinctly felt.

No unusual symptoms occurred at this time, and the patient could walk about with very little inconvenience. The œdematous condition of the lower extremities produced the most unpleasant symptoms she had.

This development of the case at once revealed the cause of the intensely disagreeable diarrhœa which had existed so long and had resisted all attempts at treatment. The case continued to be aggravated, as before, every two or four weeks, at which periods portions of the fœtal bones would be discharged.

As the head slowly descended into the recto-vaginal sulcus the œdema increased, dysuria occurred, and reflex irritation of the stomach induced vomiting, which continued to the last.

The case progressed slowly, the head gradually settling down into the recto-vaginal sulcus, posteriorly to the uterus, pressing upon the rectum and gradually filling the curve of the sacrum.

At length very painful hæmorrhoids were developed, rendering an examination almost impossible.

About the middle of October a large amount of decomposed matter had collected in the sulcus, below the head, which gradually ulcerated through into the rectum, near the anus, which opening continued to enlarge to the last. Through this opening the cranial bones could be distinctly felt overlapping each other, forming a firm cone. Most if not all of the discharge, together with the pieces of bones, after this passed through this opening.

About the middle of January, 1874, the cranial bones had become so separated that several pieces were removed, during which operation the sharp edges caused much suffering. On the 20th of January a large number of cranial and other bones, having become loosened, were removed with the aid of a small bullet-forceps, with much relief to the patient. Early in February the entire occipital, one parietal, and several other pieces were removed in the same manner, and an unusually large amount of decomposed matter passed immediately afterwards. The patient expressed herself as greatly relieved, and on the following day passed urine easily and retained food on her stomach as she had not been able to do for a long time. Most of the bones within reach had now been removed, and her comfortable condition encouraged the hope of a favorable issue of the case.

After about one week the old symptoms gradually began to return, and in a day or two increased rapidly, while the remaining portions did not settle down within reach as the others had done. On the 11th of February, while at stool and voiding a large quantity of decomposed matter, she exclaimed that everything in her seemed settling down and about to pass from her, and immediately she fainted. I was present shortly afterwards. She rallied in a few minutes, after which I made a careful examination *per anum*, and found the remaining portions quite low, though not in the rectum, but mostly back of the uterus and in the sulcus. No attempt could now be made to remove them, although she desired me to make the effort, hoping it would relieve her as it had before. As she had passed no urine for twenty-four hours, the catheter was introduced, and the bladder found empty. She gradually sank, and died in about five hours, February 11, 1874, at about nine P. M.

Post Mortem.—The post mortem was held February 12th at four P. M. External appearances natural, except the œdema of the lower extremities.

On opening the abdominal cavity no watery accumulations were

found; the intestines were lifted up and pressed backward towards the stomach and liver, and firmly sealed in this position by false membrane. The abdomen was much discolored by the foetal decomposition which had taken place. No traces of any other than false membranes were found.

The uterus and bladder, though pressed downward and discolored externally, were healthy inside. The left ovary was involved in the general destruction, and only a short portion of the left Fallopian tube remained; it was about three fourths of an inch long and about one third of an inch in diameter. The right ovary was very nearly normal in position, and natural in size and general appearance, with a tumor upon its upper side about three fourths of an inch long and half an inch thick. There were two others about the size of large peas, and all were of a peculiar kidney-shape, on the lower side.

On examining the rectum an opening was found in front, from two and a half to three inches in diameter, about five inches above the anus, and another, somewhat larger, at the extreme lower portion near the anus. In seeking for this lower opening the remaining portions of the foetal bones, etc., were removed, forming a mass about the size of a man's fist, which were retained in this position by the ureters, both of which were bared and in front of the mass.

Nothing morbid was found in the liver, spleen, kidneys, stomach, lungs, and other organs examined.

A copy of this paper and the bones will be deposited at once in the museum of the Medical Department of the University of the City of New York.



ANALYSIS OF FIVE THOUSAND CASES OF SKIN DISEASE.¹

BY JAMES C. WHITE, M. D.,

Professor of Dermatology in Harvard University.

FIFTH PAPER.

CLASS IX. *Malignant New Growths* (26 cases). One case of elephantiasis Græcorum, or true leprosy, was observed, and was the more remarkable that the patient was of native New England stock and had never been out of the United States, nor had there been in his family any record of such disease. It was of several years' duration, and the cutaneous manifestations were of the tubercular type. The cases of epithelioma were nearly all of the superficial form, and affected the skin of the face, the deeper-seated forms and cases in open ulceration naturally seeking relief directly in the surgical department. The most noteworthy features in them were the frequency with which the seba-

¹ Concluded from page 509.

aceous glands were the starting-point of the affection, and the early age at which the disease manifested itself in several cases, the patients not being above twenty-five years old.

Class X. *Ulcerations* (309 cases). Nearly all the cutaneous ulcers here included were seated upon the lower leg, and were of the most ordinary character. A large proportion of them were associated with eczema of the part, either primarily or secondarily, in the first instance provoking the inflammation in the surrounding skin by the nature of their discharges or of the applications made to them, or in the latter case being themselves the result of devitalization of the cutaneous tissues by the chronic eczematous process.

Class XI. *Neuroses* (52 cases). Were all the affections of the skin included in this class which have been claimed by the neuro-pathologist in recent times as belonging to it, there would be little need of other classes to receive them, for there is scarcely a disease among them which some writer has not guessed to be caused by "abnormal innervation," "trophic disturbance," or other familiar verbal formulæ of the sort. Now that its filaments have been traced through the corium up into the epidermal cells, the intimate connection of the whole skin with the nervous system has been as fully established as that of all other parts of the body; but why it should be selected as the favorite field of the neuro-theorizers of to-day is not clear, unless it be that electro-therapeusis can be so directly brought to bear upon it. There is no more reason why affections of the skin should *a priori* be regarded as neuroses than structural diseases of the liver, or lungs, or kidneys. That disturbances of cutaneous sensibility are frequently associated with and caused by cutaneous affections, that similar disturbances of sensibility often lead secondarily and indirectly to structural disease of the skin, and that structural disease of nerves and their ganglia may directly give rise to certain well-marked forms of efflorescence are well-established facts, because they rest upon sound observation; but beyond this most of what has been written upon the neuro-pathology of skin diseases is merely surmise and of the blindest character. Nerves go everywhere, they are distributed to all parts of the skin, they regulate all its functions and growth; therefore, if anything about it goes wrong they are at fault, say the neuro-pathologists. The blood permeates all the tissues of the skin, it supplies the nutrition upon which the growth and functions of the latter depend, itself may be laden with peccant elements, therefore, if the skin is diseased it is the blood, said the humoral-pathologists. Let us be content with the teachings of observation. That zoster might well be placed among the neuroses is universally acknowledged, but the only other affections upon the list which can claim a position in this class are the fifty-two of simple pruritus and the two of exalted sensitiveness of the skin, or hyperæsthesia. Associated with the cases of pruritus

were many secondary changes in the skin, such as are capable of being excited into existence by scratching and other means resorted to for allaying itching.

Class XII. *Parasitic Affections* (549 cases ; vegetable 278, animal 271). *Tinea tonsurans* was by far the most common of the former. Its varieties in the one hundred and eighty cases observed were as follows: Forty-two were seated upon the scalp, and affected children exclusively ; thirty-eight were of the bearded parts of the face in adult males, parasitic sycosis ; while the other hundred cases were ordinary ringworm upon various parts of the body, mostly those unprotected by clothing, in persons of both sexes and all ages. Most of the children with the disease upon the scalp had also ringworms upon other parts of the body, or had had them in the earlier stages of the affection. Nearly all the cases of parasitic sycosis, too, began as simple ringworm of the bearded face, which in periods ranging from three to twelve weeks assumed the characteristic appearances of this later stage of the disease, and many of them exhibited recurrent outbreaks of the circinate form upon other parts of the body, which served as more fertile sources of contagion to other members of the family during the prolonged course of this most stubborn disorder. A large proportion of these patients were sure that they had taken the disease at the barber's shop. All forms of the affection were shown to be easily transmitted and contracted. The clinical history and microscopic examination of these cases of sycosis make the existence and even the frequent occurrence of the parasitic form of the disease a matter far removed from question, and the refusal of Professor Hebra to accept the former inexplicable, although there can be no doubt that it is much more common here than in Vienna.

Tinea versicolor comes next in order of frequency, and in this respect it would doubtless approach *tinea tonsurans* nearer, were as large a proportion of the cases which really exist treated, for whereas the latter in all its forms occurs generally upon the most exposed parts of the surface, *tinea versicolor* avoids these altogether, and may exist even for long periods of time without betraying itself to the bearer, so slight in many cases are the subjective symptoms it causes. The extent of surface affected varied from a few small circular patches in some patients to its almost continuous distribution over the trunk and limbs in others, giving a uniform dark-buff or brown color to the whole skin, excepting the face and hands. In many instances the disease was discovered incidentally in the examination of the chest by the physicians of the other departments of the hospital. In a large proportion of the cases it had existed several years, generally extending in summer and diminishing somewhat or being less apparent in winter. In four cases only out of the eighty-one did inquiry elicit the fact of its known transference from

one person to another, even among married people, in cases of many years' duration, nor was anything learned of the ways in which the disease is generally contracted.

Tinea favosa occurred only seventeen times, and even this small number by no means represents so many individual instances or centres of the disease, because more than half of them were cases where two or three members of the same family were affected. In the others no known transference to other hosts had occurred. All of them had existed for a long time, and in all but three the growth was confined to the scalp. In one case it not only covered the scalp, but large portions of the trunk and parts of the limbs.

Tinea decalvans was represented by some of the cases placed under alopecia areata, but what proportion of these were parasitic cannot be stated for want of complete observation.

From this very brief analysis of the vegetable parasitic affections we may draw the following conclusions: *Tinea tonsurans* in all its forms is of very frequent occurrence, is easily communicated, and the latter may sufficiently explain the former. *Tinea versicolor* is less common, but occurs oftener than is suspected, and it is communicated with very great difficulty. It is probable, therefore, that extraneous sources of contagion exist about us, the nature of which is as yet unknown. *Tinea favosa* is here very rare, and occupies with respect to contagiousness an intermediate position between the above.

Animal parasites. The number of cases of phtheiriasis capitis recorded might no doubt have been greatly increased if every patient had been specially examined for the presence of pediculi. The number given includes only those cases in which the parasites were the cause of so much eczematous inflammation of the scalp and contiguous parts as to lead to their discovery.

It would have been more satisfactory if, in concluding these necessarily brief and imperfect notes upon the occurrence of skin diseases at the out-patient department of the hospital, the results of treatment might also have been presented, but, as stated in the beginning, the control of the physician in charge over this class of patients is so uncertain that any such conclusions must be in the main imperfect and unreliable, and therefore unwarranted.

RECENT PROGRESS IN OTOTOLOGY.

BY J. ORNE GREEN, M. D.

Acute Inflammation of the Cellular Tissue in the Supra and Post-Auricular Region. — Voltolini¹ calls attention to a peculiar circumscribed inflammation of the subcutaneous cellular tissue above and be-

¹ Monatschrift für Ohrenheilkunde, No. 12, 1875.

hind the auricle, which is occasionally met with, and which is not mentioned in any of the text-books on the ear. It consists of an acute inflammation of the subcutaneous cellular tissue just above and behind the ear, circumscribed in extent, wholly unconnected with the ear itself, and not dependent on inflammation of the meatus, auricle, or mastoid cells, limited entirely to the bald spot near the ear, with no tendency to spread over the scalp, but with a tendency to affect both sides at the same time. It begins with very severe pains in one or both sides of the head, which often extend into the face and teeth. These symptoms, often mistaken for toothache, are followed by febrile disturbance for a few days, and the pains then became more localized above and behind the ear, and the skin in this region becomes red, glistening, swollen, and intensely sensitive to pressure. From this stage the inflammatory process, unless checked, goes on, with the most intense suffering, to the formation of pus, which, unless evacuated artificially, forms burrowing abscesses, and these may exhaust the patient or the pus may perforate the upper and posterior wall of the meatus and so find an exit through that passage. If wholly neglected, as the result of the burrowing pus, numerous fistulæ may form in and about the ear, but there is no tendency to an affection of the bone. Generally, however, the inflammation is confined to the region above and behind the auricle.

The treatment consists in leeching freely, or better still in a free incision through all the swollen tissues with a knife, even if the inflammation has not gone on to the formation of pus, and after this in continual poulticing. If pus has already formed, a free evacuation with the knife is the only possible course. Three cases are given by Voltolini, one of which proved fatal by exhaustion, from the patient refusing to allow the original abscess to be opened.

The specific nature of the affection is shown by its affecting the same region on each side and never any other part of the body, and by its being unconnected with any inflammation of the meatus, auricle, tympanum, or mastoid cells.

If seen after the inflammation was established, it would suggest either a beginning erysipelas of the scalp or more probably a perioritis from the mastoid cells, but its distinct localization and the severity of the pain would distinguish it from the former, and an examination of the ear proving the absence of any inflammation in that organ would distinguish it from the latter.

Whether further observation will justify the very specific character which Voltolini gives to this pseudo-erysipelatus inflammation remains to be seen; but the article is of interest as calling attention to a disease that would be very apt to be referred to the ear, with which, however, it has no connection.

Operative Treatment of Otorrhœa.—Wolf¹ suggests a new method

¹ Archives of Ophthalmology and Otology, Vol. V., No. 1.

of treatment especially adapted for the small carious spots and ulcers of the bone which are occasionally found to be the source of an obstinate otorrhœa, but also useful in the removal of polypoid growths and granulation tissue which are so common. The instrument used consists of a small spoon with a cutting edge on a wire handle; it is made so small that it will not obstruct the light in the meatus, and the wire handle is made so malleable that it can be turned in any direction and yet is firm enough to allow of scraping the bone. The polypus or granulation being brought into view, and its attachment made out with the probe, the cutting edge of the spoon is pressed against the root of the growth with a slight digging motion, and the growth cut off; if now the bone is found to be carious beneath the growth, as shown by the small particles of necrosed bone in the bowl of the spoon, the carious surface is scraped until no more of the little black particles are seen.

Of course in the use of the instrument an accurate knowledge of the topographical anatomy is necessary, as by its use in certain directions there would be great risk of injuring neighboring organs. Wolf claims that except toward the roof of the cavity, where the dura mater lies in close proximity to the tympanum, this method of operating can be used without risk of danger or even fear of reaction, and in his hands has produced excellent results. Where caries existed, the operation of scraping required to be repeated several times, at intervals of a few days. Where the bone was extensively diseased, healing could not take place; but where there were only small spots of circumscribed caries, perfect healing followed the operation.

The Simulation of One-Sided Deafness and its Recognition. — For the purposes of malingering in the military service and for fraud in legal cases the simulation of deafness of one ear is not uncommon, and its recognition becomes a matter of great importance to the military surgeon and the medico-legal adviser. Various methods of detecting this simulation have been proposed, some very simple, so that they can be applied by any practitioner, others based on so many principles of the laws of sound and of aural physiology that they can hardly be considered of general value or applicability. Among the latter of these should be mentioned the beautiful and elaborate method of Lucæ¹ by means of the interference otoscope of Quinke, the objection to which, however, is that from its very elaborateness it would be liable to many errors in the hands of one unaccustomed to the instrument, and it also requires a greater degree of intelligence on the part of the person examined than could be expected to exist or at least be shown. Other and much simpler methods exist and ought to be generally known. Peuber² uses the following method in detecting this form of malingering in the

¹ Lucæ, Berliner klinische Wochenschrift, No. 9, 1869.

² Berliner klinische Wochenschrift, No. 9, 1869.

military service: Through a wall between two rooms, in one of which is the examiner and in the other the person to be examined with the witnesses, pass two metal tubes near each other. From these, two rubber tubes pass to the ears of the person to be examined, so arranged that they cross each other, in order that words spoken into the right metal tube may pass to the left ear of the examined, and *vice versa*. From each rubber tube a side tube is attached so that the witness of that side can hear the words spoken into the mouth-piece. By observations on normal ears Dr. Teuber finds that words spoken rapidly in succession, first in one tube and then in the other, very soon so exhaust the ears that the person is unable to tell into which ear the examiner speaks. Now if a malingerer is examined in the same way he will soon, from the continued examination, become wearied and betray himself by repeating some of the words which were spoken into the feigned deaf ear. As Lucæ remarks, this method cannot be considered infallible, for a very bright malingerer might be able to give correct answers; but it has this advantage, that an injustice could never be done to a person really deaf in one ear, for he would escape all confusion and never fail in repeating the words spoken into the good ear.

Another method described by Lucæ as in use by Dr. L. Müller consists in the following simple modification of the above. Words are spoken gently and quickly through any tube, as a roll of paper, into the healthy ear and repeated by the examined so as to establish how lightly and quickly one can speak and be understood. A second observer now repeats the same method in the deaf ear, and the malingerer naturally is unable to repeat them. The first observer again speaks in the healthy ear, and then suddenly both observers speak different sentences at the same time into the two ears, each through his own tube. Now, if there is really one-sided deafness, the person examined will quietly repeat the sentence of the healthy ear; if, however, both ears are healthy, he will be so confused as to be unable to separate one sentence from the other, and to repeat the one which was spoken into his so-called healthy ear.

A very simple method of detecting feigned one-sided deafness has been suggested by Moos.¹ It is based on the well-established laws of the conduction of sound through the bones of the head, which vary so much from the usual conduction through the air as to be incomprehensible to the non-professional mind. If examination of the ears shows no disease of the meatus or membrana tympani, the assumed deafness on one side must be due to disease either of the middle ear or labyrinth; if in the middle ear, it is generally due to rigidity of the conducting apparatus, and a vibrating tuning-fork with a low fundamental tone when placed on the vertex of the head in the median line will be heard

¹ Archives of Ophthalmology and Otology, Vol. I, No. 1.

only in the diseased ear; if the disease is in the labyrinth (or nervous structures), the tuning-fork on the same spot will not be heard at all in that ear, but wholly in the healthy ear. Now, in a case of malingerer, after examination of the ears has shown no apparent disease, the healthy ear is closed with a compact mass of charpie, and a vibrating tuning-fork is placed on the vertex; if the person examined still denies that he can hear the sound of the tone, even in the healthy ear, there is no doubt of his simulation. This method is used in the Austrian army with satisfactory results; the objections to it, however, are that it requires an expert examination before the trial, to be sure that there is no visible disease, and that the healthy ear performs its functions perfectly or nearly so.

Diagnosis of Total Deafness of One Side. — Knapp¹ suggests the following two methods of diagnosing total deafness of one ear as supplementary to the common tuning-fork tests. If a vibrating tuning-fork is moved up and down before a healthy ear, the impingement of the direct waves of sound on the ear will be heard louder than that of the indirect waves, consequently as the fork is moved up and down there is a regular periodic enforcement of the note. If now this ear is partially closed, this periodic enforcement is still noticed, although not so marked; but if the ear is tightly closed, the pulsations of sound are no longer heard, but a merely uniform note is perceived from the waves passing around the head and entering the other ear. In a totally deaf ear the same effect is produced as in the tightly closed ear.

The other method suggested consists in the patient's noticing the sound produced in the ear when the drum-membrane is moved by means of Sieglé's pneumatic speculum. This movement is, in a healthy ear, noticed as a sound of low pitch, but if one ear is deaf this sound is heard only in the healthy ear.

The following is Knapp's recapitulation of the tests for one-sided total deafness:—

(1.) In one-sided complete deafness, a tuning-fork vibrating on the incisor teeth or the middle line of the skull, is heard on one side only. Its sound is enforced when the ear of this side is closed, but remains unchanged when the other side is closed. This method is well known, but in many cases unavailable.

(2.) A vibrating tuning-fork, moved up and down before a healthy ear, causes an enforcement of the sound, like the puffs of a locomotive, as often as it passes the level of the auditory canal. When moved before a totally deaf ear its sound is still perceived, *i. e.*, by the other ear, but uniformly, without periodic enforcements.

(3.) The pneumatic otoscope in a healthy ear makes the movements of the membrana tympani audible as a deep but distinct sound, whereas, in a totally deaf ear it produces no sound at all.

¹ Archives of Ophthalmology and Otology, Vol. IV., Nos. 3 and 4.

RICHARDSON ON DISEASES OF MODERN LIFE.¹

THE results of modern civilization are not unmixed good. The tree of knowledge yields evil as well as good fruit, and those who eat of it should learn to select the latter and eschew the former. Every invention that diminishes labor or increases luxury offers new and unexpected evils. Every advance of science which discloses new powers also discloses new dangers. The railroad car that carries a passenger with marvelous celerity and comfort to his journey's end imparts its tremulous and rapid motion to his spinal cord and head, and subjects them to a continuous and rapid shaking which, if sufficiently prolonged, produces a disorder of the nerves that riding in the old-fashioned coach or on horseback never engendered. The stokers and crews of the steamships which almost fly across the ocean suffer from diseases that the seamen of former times and of sailing vessels never experienced. The telegraph, which brings into close communion all the nations of the earth, wears the brain and tires the eyes of those who use and operate it in a new and surprising manner. The photographer, whose pictures charm the world, himself deals with poison while producing his attractive works. Even what are called the modern conveniences of household life are doubtful blessings. The furnaces which give a summer atmosphere to our houses in winter often produce an excessive and dangerous amount of heat, and convey deleterious gases with the heat they yield. The pipes which carry water into and out of our houses afford opportunity for the introduction of the germs of typhoid fever, diphtheria, and other evils. Water itself, which comes pure into our cities and dwellings, goes out of them laden with impurities, and, unless its exit is carefully guarded, poisons the neighborhood of its outflow. Chemistry, whose wonderful discoveries have added beauty and comfort to the present age, enables the grocer to tamper with his goods, the manufacturer to poison his fabrics, puts arsenical hangings upon the walls of our apartments, colors the stockings, skirts, and head-gear of our ladies with brilliant but unhealthy dyes, tempts the confectioner to ornament children's sweetmeats with poison, and by numerous and unsuspected devices adulterates our food and drink.

So numerous and so potent are the causes of disease which are associated with the advance of civilization that they have long since arrested the attention of physicians, and are beginning to alarm and arouse the public. The book which lies before us, from the pen of Dr. B. W. Richardson, of London, an eminent physiologist and physician, on the Diseases of Modern Life, is an emphatic illustration of our remarks. In a volume of five hundred and twenty pages, Dr. Richardson has pointed out the important diseases which may be fairly charged to modern civilization. His book is intended for the public, but is also of value to physicians. "Medical in all its aspects," it is, he says, "avowedly written for the study of the intelligent public as well as for medical men; but whoever opens it to find domestic medicine, or revelations of the arcanum of medicine, will be deceived. I have written, feeling that the day of

¹ *Diseases of Modern Life*. By BENJAMIN WARD RICHARDSON, M. D., M. A., F. R. S., etc., etc. American Edition, reprinted from the English. New York: D. Appleton & Co. 1876.

popular receipts has gone by, and that the arcanum is dissolved. Avoiding every infringement on the art proper of curing disease, I have in these pages considered only the science of prevention, which many can understand, and which is a profitable science to all who condescend to learn it."

The work is divided into three parts. The first part, which comprises one hundred and sixteen pages, is somewhat in the nature of an introduction to the rest. It describes the course of natural life, when it follows the benign processes of nature, from birth to a quiet and painless death; gives a brief account of the phenomena of disease; points out that there are diseases antecedent to birth by which the sins of parents are visited upon their children to the third and fourth generation, and describes the general phenomena of disease, its origins and causes, and the phenomena incidental to old age and natural decay. The second part forms the bulk of the work, and is devoted to an account of the induced and special forms of disease which to a greater or less extent are the results of modern civilization. Here are described the derangements, both functional and organic, which come from worry and mental strain, those which are produced by physical strain, and those which arise from a combination of these causes. Four chapters are devoted to these matters. Next, there follows a brief and excellent account of the influence which the passions exert in the causation of disease. To this succeed three chapters devoted to the physiological action of alcohol and of the diseases which result from the use of alcoholic beverages. The description of alcohol is naturally followed by an account of the phenomena which result from the use of tobacco and narcotics, such as opium, chloral hydrate, and the like. Three chapters are awarded to tobacco, and one to a consideration of narcotics. The author next describes the diseases which result from excessive eating and from diseased and improper foods. Then follows a statement of the ingenious methods by which we have succeeded in rendering the air of dwelling-houses impure, and of the evils thereby induced. The effect of occupation, of sloth and idleness, of late hours and broken sleep, of errors in dress, and of imitation and moral contagion, as factors in producing disease are next described. The two closing chapters of this part are devoted to automatic affections, hypochondriasis, and the important but neglected matter of the intermarriage of disease. The third part contains a brief, clear, and excellent summary of the antecedent pages in the shape of twenty-one statements or propositions.

The description which our author has given of the wear and tear, the premature decay and functional and organic derangements, that result from worry and from mental and physical strain, is excellent, and deserves the careful consideration of every one. Americans are preëminently a hurrying, worrying, and straining people. Children hurry to and from school, fret and worry in school, and worry out of school. The merchant, professional man, artisan, and day laborer hurry to breakfast, hurry from it to their work, hurry back to dinner, then hurry to work again, from which they hurry once more to their homes, where they worry themselves into a worried sleep at night. The women hurry and worry about their households, their children, their work, their charities, their churches, and their amusements. Hurried to death, or

worried to death, would be an appropriate epitaph upon the tombstones of a vast number of Americans. Dr. Richardson's account of the influence of the railway system in producing the hurry and worry we have referred to is true and graphic. "We have," he says, "in all our large cities and towns men who are leaving their chambers, their offices, their consulting-rooms every evening in great haste, that they may arrive at the train or other conveyance that will take them a journey of some miles to their homes. Again every morning the same men, usually in very great haste, leave their homes to return to business. If this double process of travel could be performed daily with deliberation, and without exposure to physical or mental shock, it would be free of danger, and perhaps on the whole conducive to health. For the man who can partly retire and can pursue business as he lists, it is, I believe, conducive to health; but to the struggling man who is in the meshes of an active life, few processes are more destructive. The elements of danger are many. There is the annoyance which springs from danger of absence from business; there is the haste to return from home to business; there is the temptation to remain occupied to the last possible moment, and to risk an exceeding hurry in order to join the family circle at an appointed hour; there is the tendency to become irregular in the method of meals, to take a hasty breakfast, to work during the day on imperfect snatches of food, and late in the evening, when the stomach like the rest of the body is wearied, to compensate for previous deficiencies by eating an excessive meal. Lastly, there is the evil that some work, which might easily have been done during the hours sacrificed to traveling, is brought home to be completed at night, when the tired body should be seeking its natural repose." (Pages 187, 188.)

Dr. Richardson justly condemns excessive physical exertion. He does not underrate the advantages of physical exercise, but couples his commendation with the statement that he can "scarcely overrate the dangers of those fierce competitive exercises which the world in general seems determined to applaud." The disciples of muscular Christianity have pushed the practical application of their doctrines to a dangerous extreme. Because a walk of four or five miles may be taken with advantage, it does not follow that one of twenty miles will do still more good. We recall, as we write, two cases of organic disease of the heart which had their origin in the training and occasional "spurting" of the Cambridge boating crews. We commend those who purpose undertaking a course of physical training, such as rowing, wrestling, running, and the like, to Dr. Richardson's account of injuries from physical overwork.

That portion of the volume which treats of the physiological action of alcohol, and of the diseases produced by the improper use of alcoholic beverages, will excite greater interest and lead to more criticism than any other part of it. The picture which he draws of the terrible evils that alcohol induces, such as dyspepsia, disturbances of the nervous system, diseases of the heart and lungs, of the liver and kidneys, and of other portions of the body, is not overdone. Indeed, it would be difficult to exaggerate the evils that alcohol may and does engender. But his account of the physiological action of alcohol is imperfect. We regret that it is so, because it gives to his discussion of the subject the appearance, to say the least, of special pleading. A scientist has no right to

be a partisan, and we fear that, so far as alcohol is concerned, Dr. Richardson is one. He gives no account of the elimination of alcohol, or of that important matter, the ratio of elimination to absorption. He does not allude to its action on metamorphosis of tissue, or assign to it any place as an article of diet. When he asserts that the physician "contemplates its action on living function to discover that it supplies no force to living matter" (page 209), we are at a loss to know upon what data he founds such a statement. That the largest portion of the alcohol ingested is consumed in the system and is not eliminated has been demonstrated by the experiments of Anstie, Duchek, Brunton, and others. When consumed it yields force, unless alcohol is in this respect an exception to all other physical agents. As a well-wisher to the cause of temperance we regret these omissions. It is always best to tell the whole truth. The evil which alcohol induces is so patent, distressing, and far-reaching that there is no danger in pointing out the good which it may do as well as the evil.

In treating of tobacco Dr. Richardson has not fallen into the error which his dislike of alcohol led him into with regard to the latter agent. He fairly describes the results, perhaps underestimating the evils, of tobacco-smoking, chewing, and snuffing, and by so doing has strengthened the reproaches which he has visited upon these habits. Our space forbids further comments upon this admirable book. We commend it to the profession and the public as the best book of the kind with which we are acquainted. We wish it could be read by every young man and every young woman in the country. The Messrs. Appleton have printed it upon good paper and in large type, so that it has an attractive dress, worthy of its contents. There are a few typographical errors, which should be corrected in the next edition.

E. H. C.

JONES'S MEDICAL AND SURGICAL MEMOIRS.¹

THIS volume of nearly eight hundred closely-printed pages, though somewhat heterogeneously compounded, is certainly a monument of patient, conscientious labor, and it is all the more creditable to its author that he accomplished it when he was, as he says, "situated at a distance from public libraries and deprived of the intercourse of learned men and original investigators." The pathological observations are the more valuable for the reason that they form one of the few reliable contributions from the Southern side to the medical history of our war.

The first one hundred and thirty-six pages, in fine print, are devoted to an Introduction to the Study of Diseases of the Nervous System, consisting mainly of a full and well-written (although not always well-punctuated) historical sketch of the Physiology of the Nervous System, and giving proof of

¹ *Medical and Surgical Memoirs, containing Investigations on the Geographical Distribution, Causes, Nature, and Treatment of various Diseases, 1855-1876.* By JOSEPH JONES, M. D., Professor of Chemistry and Clinical Medicine in the Medical Department of the University of Louisiana, formerly Surgeon in the Provisional Army of the Confederate States. Vol. I. Introduction to the Study of Diseases of the Nervous System, Investigations on Traumatic Tetanus, etc., etc. New Orleans: Printed for the Author.

remarkably extensive and careful reading. The next two hundred pages are given to the study of Traumatic Tetanus in all its relations. Evidently, every fact of importance bearing upon the subject which the author could lay hands upon is recorded, and there is a series of tables showing the number of deaths from tetanus that have occurred in various cities of the South during the past fifty years, which in spite of the suspicion as to accuracy which must always attach to such statistical reports, unless we know under what precautions the materials for them were collected, must at least have a certain value. It appears from them that tetanus caused "a much larger number of deaths amongst the blacks than amongst the whites, in Augusta, Ga., and that it is much less frequent and fatal, both amongst the white and colored races, in Augusta, Ga., than in Charleston, S. C., Savannah, Ga., and New Orleans, La.," which, with other facts, "justify the conclusion that tetanus is most common and fatal in low, moist, hot, malarious situations."

Cerebro-Spinal Meningitis receives, in the space of one hundred and fifty pages, a like almost exhaustive treatment, without, however, any particularly new conclusions being developed.

The remainder of the book is given up to Clinical Observations on Certain Diseases of the Lymphatic and Circulatory Systems and of the Liver and Kidneys, illustrating the Relations of Dropsy to these Diseases; also to the account of Investigations on the Prevalence and Fatality of Pneumonia in the Confederate Army during the American Civil War, and to the study of Diseases of the Osseous System, especially Mollities Ossium.

It is difficult to characterize in a few words a work of so unusual a kind and treating of such varied topics. The writer certainly seems to have tried to disarm criticism as to fairness as thoroughly as possible by drawing evidence untiringly from every quarter, often with a diffuseness which we could have wished curtailed, and which, together with the fact that the immense mass of material is not always thoroughly digested, will interfere with the general acceptability of the book. It would be impossible to judge of the scientific value of the original physiological experiments without closer study than we have given them. It seems to us that the details of many of them could have been replaced to advantage by a mere statement of results, or, often, by a simple reference to well-known facts, but they all bear the evidence of having been conscientiously performed, to say the least.

It may not be out of place to add that we dislike the fashion, which has been followed here, of prefacing a good book with a rather self-asserting title-page and introduction. It is of absolutely no use to us to know in advance that the conclusions to be recorded later are illustrated by "eight hundred cases of disease, four hundred physiological experiments, ninety-five analyses of the blood and urine, and sixty tables," etc., or a hundred times that number, unless we know too with what care and skill the observations were made; and that the title-page does not and cannot tell us.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

F. B. GREENOUGH, M. D., SECRETARY.

MARCH 27, 1876. *Calculus of the Bladder.* — DR. CABOT reported the case, and showed the specimen. B. K., aged fifty, entered the hospital January 11th, with the following history. For the past twelve years he has at various times passed small stones through the urethra, some of these so hard as to be broken difficultly with a hammer. Two years and a half ago the characteristic symptoms of stone in the bladder came on, and have since steadily increased in severity. He is much emaciated and weakened, and has no control over his urine, which constantly dribbles from him. The sound touches a stone immediately upon entering the bladder. The urine contains a large amount of pus.

January 15th. He was etherized and examined with the lithotrite. The stone was found to be attached to the anterior wall of the bladder. After being detached from here it was seized, but found to be of large size and too hard to be broken. It was then removed by the lateral method. The stone came away easily, but there was some after difficulty in controlling the hæmorrhage. While pulling forward the rectum with the finger, an opening about one half an inch long was discovered. This was closed by a single stitch. On the fifth day after the operation a diphtheritic ulceration appeared upon the wound, but quickly disappeared under treatment with acid wash. After a dose of castor oil on the tenth day he had a copious discharge, a considerable portion of which came through the wound. His bladder was washed out with Sir Henry Thompson's solution, and a soft catheter left in. Almost all of the urine came through this catheter.

January 30th. Fifteen days after the operation, examination showed a hole through the rectum which admitted the tip of the little finger. He did well now till the 9th of February, when diarrhœa set in. This continued with but little interruption till his death, more than a month later.

February 19th. It being found that the feces backed up into the bladder, he was etherized and the sphincter ani stretched. The soft catheter, which had been left out for some days, was reintroduced. After this his general condition improved again.

February 29th. He was examined, and the hole in the rectum found to be twice as large as at the last examination. From this time he slowly failed. He had chills, hiccup came on, and on March 18th, two months after the operation, he died.

The autopsy revealed œdema of the lungs with lobular pneumonia. The perineal wound was closed except at the upper part, from which a small opening extended into the membranous portion of the urethra; between the prostatic urethra and rectum there was an opening three fourths of an inch in length.

Bladder firmly contracted, dark red, containing muco-purulent matter and a white friable calculus of the size of a bean; both ureters distended, mucous membrane opaque, not injected, covered with muco-purulent material.

Right kidney one third natural size, firm, capsule adherent, section pale, cortical portion atrophied, with occasional opaque points indicating commencing abscesses; pelvis contained several small calculi and some pus.

Left kidney somewhat enlarged, on separation of capsule, pale with occasional nodular elevations, one of the size of half a plum; these on section contained pus; same appearances in pelvis as in right kidney.

Left renal vein distended with a thrombus, yellow, softened centrally, in parts adherent to the wall and extending nearly to the entrance of the vein into the inferior cava.

Chemical analysis of the calculus gave the following result. Nucleus: calcic oxalate. Body: calcic phosphate and traces of calcic oxalate and triple phosphate. Crust: calcic phosphate, traces of ammonic urate, triple phosphate, and calcic carbonate.

Fractured Spine and Diseased Cord.—DR. FITZ showed the specimen, stating that the patient died under the care of Dr. Moses Parker, of Melrose. The autopsy was made on the 18th of January, 1876. The head was not opened; the thoracic organs appeared healthy. There was extensive amyloid degeneration of the liver and numerous small abscesses in the kidneys, the pelves of which and the bladder were acutely inflamed.

The fracture of the spine and dislocation forwards is seen at the twelfth dorsal vertebra, the upper anterior edge of the body of which has been detached and united firmly to the lower edge, in front and along a line extending from this point upwards and backwards to the posterior part of the upper surface. A fragment of the posterior and lower portion of the body of the vertebra above is also detached, and adheres to the upper and posterior edge of the body of the twelfth vertebra. A dislocation forwards of the spine above the last dorsal vertebra has taken place, the lower anterior edge of the body of the eleventh dorsal being in contact with the corresponding part of the vertebra below, and its lower articulating surface in part fused with the anterior surface of the body of the last dorsal vertebra, and in part separated from it by a soft tissue. The upper third of the body of the twelfth dorsal is somewhat thicker and denser than normal, but there is no evidence of impaction. The spines of these two vertebræ are separated from each other by a space of an inch and a quarter, the spinal canal being bounded here by the stretched ligamenta subflava. The articulating surface for the twelfth rib, the superior articulating process, and the arch on the right side have evidently been detached and dislocated downwards and backwards, though now thoroughly united by bone to the body of the vertebra. The articulating process on this side is thoroughly coössified with that of the vertebra above. The corresponding intervertebral foramen is nearly three times as voluminous as that immediately above. On the left side the atrophied superior articulating process has been detached, is bent forward at a sharp angle, and is united with the lamina, but separated from the thickened inferior articulating process of the vertebra above by a considerable space, which is bridged over externally by a bony spicula.

The transverse process on this side has apparently disappeared, the rib is dislocated downwards, and is united with the lower portion of the lamina in

front. A mass of bone unites the lamina with the body of the vertebra. The intervertebral foramen between the eleventh and twelfth vertebræ is rounded, though of relatively normal volume.

As a result of the dislocation of the spine, the spinal canal is somewhat constricted at the level of the upper part of the twelfth vertebra. The corresponding portion of the spinal cord for an inch and a half is flattened, gray, and translucent, apparently little else than a band of œdematous fibrous tissue, resting upon a somewhat nodular bone-like which had formed in the arachnoid behind, this being intimately adherent to the thickened dura mater. Cartilaginous and calcified scales are numerous behind, above the flattened part of the cord, and others smaller are scattered about in the pia mater of the cauda equina. Many of the nerves of the cauda equina were in a state of gray atrophy, from disappearance of the white substance. Portions of the cord from above the flattened portion contained numerous granular corpuscles, and blood-vessels appeared as white arborescent lines, from the presence of fatty degeneration of their walls.

APRIL 10, 1876. *Enucleation of the Eye.* — DR. DERBY reported the case. Miss E. R., aged forty-three, lost the right eye at the age of two years by a wound from scissors. She consulted me first in April, 1872, on account of occasional pain in this eye and weakness of the other. The right eye converged, was slightly shrunken, cornea opaque, ciliary tenderness upwards. The left eye had normal vision, but presented the intolerance of light and occasional blur that often herald commencing sympathetic ophthalmia. Enucleation of the right eye was proposed.

February 26, 1876, the right eye was enucleated. It had in the interval become more painful. The left as before.

DR. BLODGETT, present by invitation, showed the specimen, as also two microscopic preparations of the choroid, and described the appearances as follows.

The eye is flattened from above downwards, is elongated from before backward, having in this direction a roughly ovoid form, with the greater convexity behind. The globe as a whole is harder than normal, with an unyielding resistance over the posterior hemisphere. The diameter of the globe is about seven eighths of an inch. The cornea is densely opaque and the iris not visible.

Upon section of the globe under water the vitreous was found to be fluid, of about the consistence of serum, and of brownish-yellow color. The anterior and posterior chambers were still distinct cavities. In the place of the lens was a fleecy white membrane occupying the situation of its posterior wall, and this membrane contained in its centre a small point of calcification. The ciliary processes seem much thickened, broad, dense, and are covered by a grayish, flaky cloud which cannot be drawn off with forceps. The retina is present only as a delicate film of a brownish-yellow color, extending from the point of entrance of the optic nerve toward the ciliary border, but its anterior attachment is not apparent. Around these remains of the retina at the posterior portion of the globe is developed a layer of bone, leaving the point of retinal

attachment as a foramen in its centre. The bone is of roughly ovoid form, with its larger convexity above. Its upper border is tolerably sharply cut and regular, while its lower border is projected into several irregular spurs having a main direction downward and outward. The bone has a length of about seven eighths of an inch, a breadth of about five eighths of an inch, and a thickness of one to one and five tenths lines. The bone is developed in and from the choroid, which structure it replaces at the posterior segment of the globe, while at its borders the choroid is distinguishable, and presents several delicate spiculæ and lamellæ in its substance, which project forward from the borders of the bone. The appearance of the choroid to the naked eye is that of a sprinkling of minute white points upon a brown ground, with patches of a brighter color where the points are more abundant. Under the microscope the brown ground is seen to be the remains of the pigmented choroid, while the white points are points of commencing calcification. They are of an ovoid form, layered like an oyster-shell, opaque, give a white reflex by reflected light, and are dissolved by hydrochloric acid, with the evolution of gas. The proper pigment of the choroid is found only in isolated patches at considerable intervals.

Retinitis Pigmentosa. — DR. DERBY demonstrated to the society, with Carter's fixed ophthalmoscope, a case of retinitis pigmentosa. The patient, a healthy New England farmer, aged forty-five years, was the child of first cousins. Commencing with night blindness at the age of puberty, the disease had been advancing up to the present time, and blindness would soon ensue, the patient now being unable to go about alone.

Dr. Derby remarked that this was the second instance of this disease occurring in connection with blood-relationship of the parents which he had shown the society. The influence of such antecedents in promoting the disease had been denied by some, and the collection of accurate statistics was exceedingly desirable. He himself had met retinitis pigmentosa seventeen times among eleven thousand patients, and the parents had been first cousins in seven of these. There were no deaf-mutes among them.

APRIL 24, 1876. *Tumor of the Breast. Intra-Canalicular Papillary Fibro-Myxoma.* — DR. BIGELOW reported the case, and stated that this was a form of the affection described by Brodie as sero-cystic disease. The patient was a middle-aged woman; her left breast was enormously enlarged, ovoid, and nearly the size of two lamp-globes. Upon its surface were several ulcerations of the size of a shilling, covered with a scab. The duration of the tumor was five years. When first noticed it was the size of a hen's egg; in three years it doubled, and during the last six months also has doubled in size, now growing very rapidly, with great pain.

The mass was not adherent to the muscles, was readily excised, and in ten days the wound had nearly healed. This benign growth, well described, as has been said, by Brodie, was afterwards believed to be a form of mammary hypertrophy, and on section shows cysts, some minute, some enormous, one in this case containing nearly two pints of fluid. Such cysts were called proliferous, and their contained growth or offspring was considered, on account of

its grape-like lobulation both to the eye and under the microscope, to be a form of mammary hypertrophy — an enlargement of the normal gland-structure, which is also grape-like. This contained growth hangs from one or many places of the interior of the cyst-wall, increasing until the cyst is filled with its solid contents. On section these masses can be turned out from their bed, sometimes of the size of a hen's egg. Sometimes they are almost microscopic, and can be picked with the point of a pin from their equally microscopic cavities. "Chronic mammary tumor" is a similar growth, without the fluid cysts.

This general description still holds good if we only adopt the views of Virchow, and substitute for the supposed mammary lobulation a merely papillary one. Virchow directs attention to the frequency of papillary growth from connective tissue, whether as common warts upon the skin where papillæ preëxist, and similar so-called venereal warts, but which are not venereal, or growths intruding upon cavities where there are no papillæ; among the last are the so-called Pacchioni's glands, and cardiac vegetations. Similarly the connective tissue intrudes upon cysts formed by dilated mammary canals, and is the real origin of their contained proliferous growth, the epithelial lining of the enlarged canals investing the surface of the lobules. In the fine specimen shown it is seen that much of the material presents an anasaruous or gelatinous appearance; this is due to the fact that its connective tissue is imperfectly developed. Such embryonic condition of connective tissue is known as myxoma, hence the name given to this tumor, derived from its origin and structure, is intra-canalicular papillary fibro-myxoma.

DR. FITZ exhibited the tumor, and called attention to the various degrees of development of the connective tissue, and of its papillary growth, as regards both its structure and its size. He considered it to be a very beautiful illustration of this form of tumor, and alluded to a clinical point which Dr. Bigelow had omitted, namely, the tendency of the papillary masses, after crowding and distending the cyst, to perforate it by ulceration and to appear upon the surface. The growth might then be mistaken for a malignant one. The integuments surrounding the fungoid mass, however, are usually detached from it, and not incorporated with it, as in protruding cancer. Another point is interesting; in some forms of these tumors the lining membrane of the cysts is found under the microscope to have beneath it an infiltration of juxtaposed cells in the connective tissue. Such a growth should be regarded as sarcomatous, and this variation in structure explains the tendency to recurrence in certain cases of sero-cystic disease; fortunately, it is exceptional.

THE ANNUAL MEETING OF THE BOSTON MEDICAL ASSOCIATION.

THE meeting this year, held on May 1st, was of unusual importance, as several changes in the fee table were proposed.

The charge for mileage in cases involving travel was made \$1.00 to \$3.00, instead of \$1.00 to \$2.00, and the clause relating to longer distances was

dropped. The clause with regard to special charges in venereal cases was also dropped. Finally it was voted that a physician should be entitled to charge half fees to physicians not residing in the city.

The fee table is but an approximative affair at the best. It does not really prescribe what physicians shall charge for their services, but rather records the charges which the majority of physicians find it on the whole suitable and profitable to make. Of necessity it contains clauses which provide for diminishing a charge if the patient cannot afford to pay it, and increasing it when the gravity of a case, unusual detention, or other modifying circumstance makes the physician's services of more value than usual. These changes must, of course, be regulated by the good sense and good taste of the attending physician. No one else can be so well acquainted with the circumstances of the patient, or the importance of the case. When we follow the fee table, or rather the spirit of the fee table, we may not regard ourselves as succumbing to rules prescribed by others, but rather as showing a reasonable deference to the opinions of our colleagues and associates, and doing our best to create unanimity among them. Certainly we have reason to congratulate ourselves that but few physicians in this community are not disposed to encourage this unanimity, though we occasionally hear of charges so exorbitant that they would stand a small chance of being sustained in a court of law.

The changes made in the fee table this year are not very important ones. There seems to be no reason for making a special charge in a case of gonorrhœa or syphilis, unless the case happens to be one of "unusual importance," etc., when the charge could be increased under any circumstances.

The vote with regard to charging half fees to physicians was by no means intended to act oppressively. Physicians are ready enough to do reasonable service for their professional brethren, and the vote in question would never have been introduced but for the extraordinary and unreasonable calls that are frequently made, without any apparent regard for the loss of time and strength caused by them.

Only with regard to the charge for mileage was there a decided difference of opinion, it being maintained on the one hand that a charge of \$2.00 per mile was enough, and that it would tend to discourage consultation if it was increased to \$3.00, and, on the other hand, that \$3.00 was sometimes not too much, and that all objections to the change were obviated if the minimum charge was kept at \$1.00. The fact that the change was finally made would seem to show that a considerable number of physicians find their services in demand at this price.

A very praiseworthy motion was offered that the regular fee for a visit made in answer to a summons sent after twelve M. should be \$5.00, instead of \$3.00, in order to break up the annoying habit of waiting till afternoon before sending for a physician, when he might just as well have been sent for in the morning, and perhaps have been saved the trouble of going over the same ground twice. The plan was, however, considered impracticable, and the motion was lost. It was suggested as equally desirable to demand a larger fee whenever a message is sent to "come as soon as possible," when really there is no haste. When the fee table is made a part of the regular course in the public schools, such provisions will be of the first importance.

MEDICAL NOTES.

— The so-called shower of flesh in Kentucky is made the subject of a communication to *The Sanitarian* for May, 1876, by Leopold Brandeis of Brooklyn. The writer said that in 1537, while Paracelsus was engaged in the production of his "elixir of life," he came across a very strange-looking vegetable mass, to which he gave the name of "nostoc."

The want of rapid transportation, combined with the perishable nature of the substances fallen, have hitherto prevented a complete and exhaustive examination. The specimens of the "Kentucky shower," however, reached this city well preserved in glycerine, and it has been comparatively easy to identify the substance and to fix its status. The "Kentucky wonder" is nothing more or less than the nostoc of the old alchemist. The nostoc belongs to the confervæ; it consists of translucent, gelatinous bodies joined together by thread-like tubes or seed-bearers. There are about fifty species of this singular plant classified; two or three kinds have even been found in a fossil state. Like other confervæ, the nostoc propagates by self-division as well as by seeds or spores. When these spores work their way out of the gelatinous envelope they may be wafted by the winds here and there, and they may be carried great distances.

Wherever they may fall, and find congenial soil, namely, dampness or recent rain, they will thrive and spread very rapidly, and many cases are recorded where they have covered miles of ground in a very few hours with long strings of nostoc.

On account of this rapidity of growth, people almost everywhere faithfully believe the nostoc to fall from the clouds, and ascribe to it many mysterious virtues. The plant is not confined to any special locality or to any climate; sown by the whirlwind, carried by a current of air, in need of moisture only for existence and support, it thrives everywhere. Icebergs afloat amid ocean have been found covered with it. In New Zealand it is found in large masses of quaking jelly, several feet in circumference, and covering miles of damp soil; and in our own country it may be found in damp woods, on meadows, and on marshy or even gravelly bottoms.

All the nostocs are composed of a semi-liquid cellulose and vegetable protaine. The edible nostoc is highly valued in China, where it forms an essential ingredient of the edible bird-nest soup. The flesh that was supposed to have fallen from the clouds in Kentucky is the flesh-colored nostoc (*N. carneum* of the botanist); the flavor of it approaches frog or spring chicken legs, and it is greedily devoured by almost all domestic animals.

Such supposed "showers" are not rare, and are entirely in harmony with natural laws. In the East Indies the same nostoc is used as an application in ulcers and scrofulous disease, while every nation in the East considers it nourishing and palatable, and uses it even for food when dried by sun heat.

— Dr. Bourguignon recommends, in *L'Union Médicale* of March 30, 1876, the potassio-tartrate of iron as a useful application in varicose ulcers of the leg. He finds ulcers with hard, well-defined, and unhealthy surfaces yield so readily to the application as to be cured in two or three months. According

to the sensibility of the ulcer, a solution of from two to six parts of the tartrate is to be made in one hundred of water, a few drops of ammonia being added to prevent precipitation. Pledgets of charpie are then soaked in it and applied to the ulcer night and morning, and covered with a thick layer of cerate. This by means of tepid water must be so removed as to leave none of the charpie adherent to the ulcer. After cicatrization has begun, the lotion needs only to be applied in the evening, simple cerate being substituted in the morning. An opiated cerate may be alternated with the simple if the application is painful at first.

BOSTON DISPENSARY.

GYNÆCOLOGICAL CLINIC.

[SERVICE OF W. H. BAKER, M. D.]

CASE I. Mrs. W., born of Irish parents, thirty-two years of age. Miscarried the seventh month of her first pregnancy; has given birth to three children since. About ten days after her second confinement she was about her work, but she felt pain and bearing-down sensation in the pelvis, and each succeeding labor increased the trouble to such an extent that she was obliged to seek medical advice. She presented herself at the Boston Dispensary six weeks after the birth of her last child. On examination Dr. Baker found subinvolution of vagina, forming cystocele and rectocele, for which he advised operations on the anterior and posterior walls of vagina as the most speedy method of cure, but the patient was unable to give time to the operation, being obliged to take care of an invalid husband and three children. A block-tin retroversion pessary, after the model of Hodge, was adjusted, which was free and loose in the vagina allowing the finger to pass readily all around it. Patient was told to report in a month or so, or sooner if she experienced any inconvenience from the instrument. Nothing more was heard of her for a year, at the expiration of which time, she having returned, the pessary was found to fit so closely in the vagina that the finger could not be passed around it as before. The vagina had so far recovered its tone that a much smaller pessary was required, and introduced. Mrs. W. for the whole year had derived the greatest amount of relief, having been able to attend to her work without any discomfort whatever. Dr. Baker remarked that in the majority of cases, if the pessary be properly adjusted to the parts, it will be found necessary from time to time to substitute a smaller instrument, and that by thus relieving the vaginal walls from their part in the support of the uterus, an opportunity is afforded these walls to recover their original tone and normal condition, when they will be able to give their proper support to the uterus without mechanical aid. This illustrates the point so often insisted upon, that for a pessary to do the greatest amount of good, and afford the greatest relief, it must not fit closely, but must be sufficiently loose in the vagina to allow the finger to pass freely around on all sides.

CASE II. Mary C., Irish, aged fifty. Occupation, domestic. Came to this country nine years ago. The year she came here her menses stopped; always healthy previous to this time. Has had two children; first, ten months after

marriage; second, one year and nine months after first, this child still-born. Labors short, but severe. About seven years ago, without any known cause, a small tumor, about the size of an egg, appeared at the vulva. This was soft, feeling, as she said, like "a little bladder," and bled a little. She went to the Dispensary and had a ball pessary introduced, with directions to remove it at night, and replace it in the morning. This she did for three or four days; then she bought a large rubber ball, about two and a half inches in diameter, just as large as could be pushed past the vulva. She had some difficulty in passing her water, it not flowing freely, although no pain whatever was complained of. This was due, probably, to the great size of the ball pressing on the urethra, causing a constriction. After this ball had been worn about three years without the slightest discomfort, she began to have a constant foul-smelling discharge. The stench was so great that she could not remain long near any one, and it was difficult for her to keep a place. She managed to have a separate bedroom to herself. She was ashamed to consult a physician, though she felt that this filthy discharge was telling on her health. Sick and discouraged she finally visited the Boston Dispensary March 3, 1876, after having worn the ball for seven years. Dr. Baker removed the ball. In it was a rent about an inch long, and through this the secretions of the uterus and vagina had found their way into the interior of the ball; here they underwent decomposition, forming the foulest of foul fluids. With certain motions of the body, a portion of this offensive liquid was squeezed out into the vagina, keeping up considerable vaginitis. Dr. Baker sent her to the Free Hospital for Women on East Springfield Street, and there on March 20th operated on her for cystocele. I saw the patient April 10th and found the vagina in a fine healthy-looking condition, the parts almost healed, and the patient feeling and looking much better than when I first saw her. This case is interesting from the fact that so large a foreign body had remained in the vagina for seven years without doing more harm; and that a short time devoted to a cure in the beginning might have saved her several years of discomfort and pain.

CASE III. Mrs. S., of Irish birth, twenty-five years of age, came to the Boston Dispensary a short time ago, and reported that she had had intercourse with her husband, who the next day left for the West. Finding that he had gonorrhœa, he wrote to her asking if she was troubled the same way. This led her to consult Dr. Baker. On examination he found a suspicious-looking ulcer confined entirely to the posterior lip of the cervix uteri; the base of the ulcer was not indurated, but bled at the slightest touch with the cotton stick. Patient reported that previously intercourse caused slight bleeding. Dr. Greenough was asked to see the case; he considered it non-specific. A portion was sliced off for microscopical examination. So profuse was the hæmorrhage, after the cut, that styptic cotton was applied to control the bleeding. Patient was ordered tonics, and told to report again in a short time. Three weeks brought her back with the cut surface of the cervix uteri healing over well. Another piece was sliced off, and styptic cotton applied. The specimens were submitted to Dr. Cutler for examination, who reported them prolific in young cells, though there was nothing decisive in their

character. Dr. Baker thought it due to the friction of the posterior lip on the posterior wall of the vagina, resting as it did on the floor of the pelvis, probably starting from some slight endometritis. There was a muco-purulent discharge from this abraded surface, which doubtless caused the symptoms of gonorrhœa in the husband. It is evident, therefore, that the slightest causes may sometimes set up urethritis in the male.

O. H. MARION.

LETTER FROM PHILADELPHIA.

MESSRS. EDITORS. — The comments which have been elicited by the paucity of Philadelphia medical men among those who will address the International Medical Congress, or open the special discussions, have frequently led to the remark, "It is the fable of the old man and his ass over again." Perhaps this may be true, for if Philadelphian names had been in majority upon the programme, the comment would probably have been, "Philadelphia has taken the lion's share." But since taking too much would have been worse than taking too little, the matter is better as it is. This dearth of Philadelphian names is not accidental. After some discussion, the medical commission decided to take but a modest share of the programme. This is the result not only of the proper feeling which gives guests prior consideration, but is the outgrowth of a very natural fear that if a large number of Philadelphia men were given active part in the exercises, there would be dissatisfaction. It is true that there are brilliant medical men in this city who by this arrangement are left in shadow; men who would perhaps have added to the celebrity of Philadelphia as a medical centre. On the whole, however, the programme seems to be wisely arranged, and, it is to be hoped, gives general satisfaction. I have no additional news to give you concerning the congress. The corresponding secretaries are constantly receiving replies to foreign invitations. Several leading men of England and the Continent whose presence at the congress was anticipated, have announced their inability to come.

The hospital of the centennial exposition, which was to have been one hundred feet long, has been reduced to sixty, and some of the conveniences which would have made the building more comfortable during the hot months have been set aside because of lack of funds. The commission are now \$1,500,000 in debt, notwithstanding the \$1,500,000 voted by Congress. This deficit will undoubtedly be more than covered by the entrance fees. Ten thousand dollars per diem for one hundred and eighty days (the duration of the exhibition) will put \$1,800,000 into the treasury of the commission. The anticipation is that far more than twenty thousand persons will visit the exposition daily during its continuance. It may be that additional hospital conveniences will be erected so soon as the authorities realize, as they undoubtedly will, that there will be more extended calls upon the officers of the medical service than they are now inclined to believe. There will be a male and a female ward, but no provision has been made for a class of cases which will be certain to be well represented, namely, confinement cases. Statistics show that during the Paris exposition there were seven hundred and eighty cases of labor on

the grounds. Our summer weather is so much more intense than that to which many who will attend the exhibition are accustomed, that the effects of heat, together with the great fatigue incident upon the work of visiting merely the principal buildings, will be certain in many cases to bring on labor. There are already three thousand individuals who are living on the grounds. They make constant calls upon the resident physician. The probable additional cases of sickness during the exposition will give busy hours to the other officers of the medical service. It is anticipated that the most trying cases will be those of sunstroke. As many as twenty-seven persons in one day have been carried to the Pennsylvania Hospital alone during past summers. In the largest buildings of the exposition the temperature is much lower than that of the outer air, but it will be in wandering from one building to another that visitors will especially feel the effects of our tropical weather.

That case-hardened, shameless individual, the man Buchanan, who writes himself "professor," who is the mainspring of the swindling establishment known as the "University of Philadelphia," and who has brought so much obloquy upon the medical schools of America by advertising and selling diplomas here and abroad, has just been arrested for causing obscene books to be distributed about the city. He is an abortionist, and one of the horrible class of men who advertise for patients who are "victims" of nameless causes. The similarity between the title of his shop and that of our noble and venerable University of Pennsylvania has misled more than one stranger student.

The audacious manner in which Buchanan has deceived men of some culture in Europe as well as in America is notorious. He pretended to have a medical college acting under a charter of this State. A document of this character was by some dark cunning obtained from the legislature, but has since been repealed. Buchanan, however, in company with another person by the name of Paine, and equally notorious, still keeps up his unlawful establishment, and nobody interferes. The whole business, however, is so insulting to the regular schools, and causes such indignation, that I heard one professor of long standing say, "In spite of the illegality of the deed, I would willingly be one of three to blow the concern into atoms."

One of Buchanan's victims, the son of an English clergyman, and himself a man of experience and education, according to the *Philadelphia Press*, wrote last autumn as follows: "At all events I am puzzled about the 'University of Philadelphia.' I obtained a diploma from this institution in 1870, and not long after a leading clergyman gave people to understand that he had been in Philadelphia, but could not find the university. I went over to Philadelphia and had no difficulty in finding the university sufficiently conspicuous on Pine Street, one of the principal avenues of the city. The building occupied was large and in good order. The ground floor seemed to be used as a public dispensary, and was well fitted with medical appliances. On the first floor was a theatre for lectures, on the second another, and on the third a dissecting room, with one or more partially dissected subjects." As the *Press* remarks, "The institution undoubtedly had a local habitation and a name, but a curious collection of students pursuing curious lines of research must have occupied these theatres. The apparent purpose of the so-called 'University of Phila-

delphia' was to deal in diplomas, not only as certificates of medical knowledge, but also of studies in the arts, sciences, law, and divinity." The prospectus, which was circulated in Europe, gives the name of Hon. John Fest as president of the establishment. In the Philadelphia Directory, the only person of that name was a jeweler living in the northern part of the city. Probably great liberty was taken with names given as those of trustees. The secretary is put down as Hon. C. F. Clothier, a merchant. In the main the names appear to be fabrications. Thirteen trustees and twenty-six instructors are mentioned. Not one half of them are found in the city directory, and where they do appear, shoemakers and laborers are metamorphosed into doctors, lawyers, and clergymen. Apparently there are three or four physicians, so called, who engaged in this swindle, — at least, their names are included, — but they dwell in obscure parts of the town. It is supposed that Professor Rogers, of the University of Pennsylvania, has been insulted in the name of a fabricated "R. H. Rogers, A. M.," and the "R. A. Simpson, D. D., Prof. of Divinity," it is thought, infringes upon the character of the well-known Bishop Simpson.

The mere idea of theological graduates from Buchanan's Casino is so paradoxical as to puzzle Sathanas himself. It would be difficult to find such, and, if they be preaching, it would be a curious experience to hear their sermons. The degrees of this wild-cat concern were sold through agencies in England and upon the Continent, and many persons in town, so says the *Press*, know of clergymen who look with complacency upon diplomas which give them degrees in art and divinity, and which were purchased of Buchanan.

It is, perhaps, fortunate for America that this species of swindle is not confined to this country. Similar frauds have been carried on in England, but under greater difficulties, and as to the Continent, the following letter written by an English candidate for German honors, and published by the *Press*, tells its own story: "As to diplomas, I discovered another scheme of the man who advertises as 'Medicus.' I was informed by him that he would forward for me an application to the University of Rostock, the expense being £15 and not returnable. If successful, a further sum was required. I wrote a short Latin letter to the Dean of Rostock, who sent me a printed form, in German, stating the conditions of application for Ph. D. to Germans and foreigners. They are too complicated to quote. The expense is about £10, the bulk being returnable to the candidate if unsuccessful. 'Medicus' was probably making £7 or £8 out of every candidate whom he induced to apply to Rostock, by pocketing the returned diploma fees. This is enough to settle the character of Medicus."

After showing the difference between the usages in American and foreign universities, the *Press* adds: "But we have never heard of a single reputable educational institution in America which sold its honors for cash payments. A man who will buy a certificate of attainments which he is not required to prove must have some weakness about his moral nature. A right-minded person would not think of offering money for a diploma or literary honor. Yet we write this with misgiving as we recall the numerous gentlemen, particularly in England and Canada, who have been taken in Buchanan's snare. They

seem usually to be simple-hearted folk, often of real industry, of good connections, and of respectable attainments (?). These amiable people wonder how these fraudulent universities are allowed to exist in America without suppression instant and complete. They do not seem to wonder that our States have hardly yet aroused themselves to realize that it is necessary to defend fools against the disreputable business of buying literary honors to which they set up no claim but payment of money."

The strife between the progressive and non-progressive participants in the discussion as to the necessity of raising the standard of education in the University Medical School, has been much warmer than outsiders are aware. The result reached was not, by any means, that which the progressives hoped to attain. It was not an indication of timidity, as intimated in your editorial of this week, but a compromise of necessity. Undoubtedly it is only a temporary broad stair in the ascending standard of teaching in this school. The matter will not rest here. Let the friends of the higher standard of education be patient. The oldest medical school of America will not be the last to take rank with the Harvard school. The heaven is working. At a day not very distant the system of education in the medical school of the university will be upon a par with her facilities for teaching, her fine laboratories, her noble buildings.

The Medical Department of the exposition will be represented by a model army hospital and sets of all instruments and appliances used in military surgery and medicine. The whole will be under the charge of Assistant Surgeon J. J. Woodward.

X.

PHILADELPHIA, April 28, 1876.

DR. W. H. H. HASTINGS has been appointed Superintendent of the Boston Dispensary.

NORFOLK DISTRICT MEDICAL SOCIETY. — At the annual meeting of the society, held May 9th, inst., the following officers were chosen for the year 1876-77: President, John P. Maynard; Vice-President, Robert Amory; Secretary and Librarian, Arthur H. Nichols; Treasurer, George J. Arnold; Commissioner of Trials, Thos. H. Dearing; Reporter, James S. Greene; District Nom. Committee, Henry Blanchard; Committee of Supervision, Willard S. Everett, Benj. Cushing; Censors, George Faulkner, John W. Chase, Washington B. Trull, Orville S. Rogers, Francis W. Goss; Councillors, George J. Arnold, Henry Blanchard, Wm. H. Campbell, Benj. E. Cotting, Robert T. Edes, David S. Fogg, Francis F. Forsaith, Chas. C. Hayes, Christopher C. Holmes, George King, James Morison, Joel Seaverns, Joseph Stedman, Chas. C. Tower; Orator, Henry P. Bowditch.

BOOKS AND PAMPHLETS RECEIVED. — Medical Department of the University of Georgetown, District of Columbia. Washington. 1876.

Mental and Nervous Disorders. By D. A. Morse, M. D. (From the Cincinnati Lancet and Observer.)

Summary of Seven Years' Work of the State Board of Health of Massachusetts. Prepared by W. L. Richardson, M. D. Boston. 1876.

Hydrodipsia and the Water Supply of Living Bodies. By Z. Collins McElroy, M. D. (Reprinted from the Cincinnati Lancet and Observer.)

Lectures on Orthopedic Surgery and Diseases of the Joints. By Lewis A. Sayre, M. D. New York: D. Appleton & Co. 1876. (For sale by A. Williams & Co.)

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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A CASE OF IDIOPATHIC PERITONITIS COMPLICATING LABOR.

BY JAMES B. AYER, M. D.

JANUARY 25, 1876, I was called to attend Mrs. C. D. B., aged thirty-seven years and nine months, in labor with her first child. A year previous she had had a miscarriage.

For two years she had been debilitated, and during the five or six months preceding confinement she found that the slightest exertion fatigued her, and she was compelled to give up her daily walk for exercise. For the last two months she complained of being very feverish, and insisted upon opening the windows and doors, even on the coldest days. At night she felt uncomfortable with an ordinary amount of bed-clothing. At times her breathing was very rapid. She had been jaundiced at frequent intervals since 1860. As far back as then she was told by physicians that her liver was much enlarged.

Considering the age of the primipara, the labor was very easy. First head presentation. Child, weighing nine and one half pounds, was delivered in ten hours after the first pains. Placenta followed quickly, and the uterus contracted readily and firmly. The perinæum was ruptured slightly, but not enough to require *serre-fines* or sutures. During the labor the patient frequently breathed rapidly and with difficulty. She complained of feeling very warm, and demanded that the doors should be open and the room kept cool. The temperature, taken a few minutes after delivery, was 100°; pulse 88. There were no after-pains, and she slept quietly the remainder of the night.

January 26th, 8.30 A. M., five hours after delivery, I visited the patient and found her jaundiced and the abdomen tympanitic. When pressure was made at either side of the uterus, the patient experienced a slight amount of pain. She had had no chills nor vomiting. Pulse 90; temperature 100½°; respiration 35. During the day there were five dejections of a yellow color. Urine was passed readily, and showed no change in color. Patient took light diet well. At night the pulse was 94; temperature 100°.

January 27th. Slept well last night, and is comfortable to-day. Pulse 90; temperature 101°; respiration 30. Heart and lungs examined and

found healthy. Abdomen tense as a drum. An enema containing turpentine brought away a large amount of wind. Slight pain at the sides of the uterus when I pressed hard. Diarrhoea has ceased.

January 28th. Patient cheerful; says that she has a good appetite. Breasts filling with milk, and the child, when put to them, nurses well and seems satisfied. There is no pain over any part of the abdomen, even when considerable pressure is made.

January 29th. Temperature rose suddenly last night to 104° , and remains nearly as high to-day. Patient, however, is comfortable; skin is not very hot; tongue moist. The lochia are scanty. The perineal wound appears to be healthy.

January 30th. Morning temperature 102° ; evening temperature $104\frac{1}{2}^{\circ}$; pulse 120; respiration 36. Slight delirium during the day. Entire absence of abdominal pain. Patient can lie on the back only, but does not flex the knees. The secretion of milk continues.

January 31st. Patient is perfectly conscious and does not suffer. Has taken beef-tea and milk freely. When pressure is made over different parts of the abdomen she has no feeling of pain. Temperature $104\frac{1}{2}^{\circ}$. At night the respiration became more hurried, and the pulse thready. Towards midnight she became unconscious, and died a few minutes later, on the sixth day after delivery.

The autopsy showed that the whole peritoneum was inflamed, and, in numerous places, lined with a purulent secretion. The abdominal cavity contained a pint of sero-purulent fluid.

The uterus was well contracted, and both its inner lining and its substance were found in the condition which would be expected on the sixth day after delivery. The Fallopian tubes, ovaries, and broad ligaments showed nothing characteristic of disease.

The liver was much enlarged, weighing about five pounds; it was otherwise normal.

The heart was healthy. Lower lobe of left lung œdematous; lungs otherwise healthy. Each pleural sac contained six or seven ounces of serum.

The other organs were found in a healthy condition.

The healthy appearance of the uterus and of its attachments proves that this case could not have been one of ordinary puerperal peritonitis. On the other hand, the feverish symptoms and rapid respiration (in which the abdominal muscles took no part) noticed several weeks before confinement in connection with a temperature of 100° at the close of an easy labor, and with the absence of rigors, point to a peritonitis of latent character developed previous to confinement.

According to Hervieux and Fordyce Barker these cases of uncomplicated peritonitis, where no other pathological modification is found, are extremely rare. Knowing that this disease may occur in pregnant

women, we should expect to find it much more frequently, when we consider the amount of pressure and friction exerted upon the other organs by the expanded uterus, especially in a case like this, where one of the organs is greatly enlarged and not compressible.

This case is peculiar on account of the absence of many of the diagnostic symptoms of peritonitis. We should have expected rigors and vomiting, arrest or suppression of the mammary secretion, together with a flabby condition of the mammae and a soft, uncontracted condition of the uterus. The pale face, sunken eyes, and collapsed cheeks of peritonitis were not present in this case.

In regard to the absence of pain, Schröder mentions cases where the inflammation had involved the whole peritoneum, as proved by autopsy, where only slight abdominal pain was noticed, and that limited to each side of the uterus. Churchill mentions five cases which he has seen of intense general peritonitis where there was no pain nor tenderness whatever.

SALICYLIC ACID IN ACUTE RHEUMATISM.¹

BY S. K. TOWLE, M. D., OF HAVERHILL.

CASE I. Mr. M., age about thirty, three days ill with all the signs of the commencement of a severe rheumatic fever, the pain being so severe that two drachms of Squibbs's liquor opii comp., administered during the previous day, had failed to give ease. The right wrist was the joint most affected, it being much swollen, very red, and exquisitely tender to touch or motion. Salicylic acid was prescribed at nine A. M., in ten-grain doses, in the ordinary powder wafers, to be taken every hour, and this was followed until nine P. M., thus administering two drachms during the day. After the seventh powder the swelling, redness, and pain sensibly subsided; after the ninth a decided buzzing in the ears was felt, which continued until the next day. Twenty-four hours after beginning this treatment, all the symptoms had nearly disappeared, and active motion of the wrist caused no pain. A few more powders were ordered to be taken if the buzzing subsided or the pain returned, four only being taken, and the next morning, forty-eight hours from taking the acid first, the patient returned to his usual work (shoemaking), and has since had no trouble of a rheumatic character.

CASE II. Mr. C., age about twenty-seven, ill for three weeks with acute rheumatism, the right knee being thickened and enlarged, while the other joints affected were convalescent. Salicylic acid was prescribed as in Case I., and seven powders were administered, when the patient became so excited and delirious that the friends were frightened. The patient was with difficulty kept in bed, and moved the affected

¹ Read before the Essex North District Medical Society.

limb about without any appearance of pain or tenderness. The next day there was some buzzing in the ears, but no excitement remaining, and no improvement of the rheumatism. A few days later a second trial of the salicylic acid was made, with the same results of excitement and no permanent improvement.

CASE III. A very delicate child of about five years of age had both ankle-joints and one wrist presenting characteristic symptoms of acute rheumatism. Salicylic acid was given in three-grain doses in dry sugar, the wafers not being easily swallowed. After four powders, vomiting ensued, and no more were taken until the next day, when three powders again induced vomiting, and as the rheumatic symptoms had nearly disappeared, the treatment was discontinued. In this case I think the dose was too large for the child, and the method of administration unfortunate.

CASE IV. Mrs. M., age about forty, had been suffering for nearly a week from a severe sciatic form of rheumatism in one hip and thigh. Salicylic acid, in six to eight grain doses, was given six to eight times a day, for four days, and appeared to do good service, though the effect was not as pronounced as in some other cases.

CASE V. Mr. L., age about thirty, affected in both ankles severely, also to a less degree in the arms, took ten-grain powders hourly, in wafers, for ten hours one day and eight the next. On the third day he was able to walk, though still quite lame. For a few days he took three to five powders daily, and convalescence progressed rapidly.

CASE VI. Mr. M., age forty-two, right fore-arm and wrist much swollen, red, and painful, but on inquiry it appeared he had overworked his arm by using a very heavy tailor's goose for several days. This was judged to be the cause of the rheumatic appearances, but by way of experiment the salicylic acid was used to the buzzing extent for two days, without, however, any marked good result; though the patient thought he perceived a lessening of the pain as the effects in the head and ears were felt.

CASE VII. Mrs. D., age forty-five, presented a well-marked case of rheumatic fever for about ten days. She had suffered severely from the disease before, and could be moved only on a sheet for many days. She had so failed to receive benefit from treatment that she had determined this time to "lie still and sweat it out" without any aid or hindrance from doctors. The severe and constant pain had, however, finally weakened her heroic resolution, and I was afforded the opportunity to try the salicylic-acid treatment, which I did in eight-grain doses, taken from ten down to four times daily. The result in this case was a decided and immediate improvement so far as pain, tenderness, sweating, and swelling were concerned, but considerable stiffness of the various joints remained for a week or ten days, so that the patient did not move about the house freely.

The impression left on my mind by these few cases is that salicylic acid is of very decided value in acute rheumatism, and that the more acute the case the more certain we may be of success by using it in full doses.

SALICYLIC ACID IN ACUTE RHEUMATISM.

BY RALPH C. HUSE, M. D., OF GEORGETOWN.

JAMES F., male, thirty years of age, is subject to repeated attacks of acute rheumatism, during which he has been confined to the bed for periods of several weeks, all the joints being involved, with cardiac complication in the first attack.

While reading an item relative to the treatment of this disorder by salicylic acid, in the JOURNAL, I was called to treat a fresh attack in the above-mentioned patient.

March 26th, eight P. M. J. F., rheumatism. One knee and the opposite ankle were swollen, hot, and exquisitely tender; tongue creamy; urine showed heavy deposits of urates and coloring matter. Treatment, Dover's powder, five grains once only. Two hours after, two grains salicylic acid, in sugar, hourly until the patient is relieved. Joint to be wrapped in cotton batting.

March 27th. Slept part of night, is less feverish, pulse is slower, below 100°, and the joints are somewhat mobile. Treatment: acid, two grains every two hours; diet, simple toast or gruel; Dover's powder if necessary to relieve pain, or to induce sleep.

March 28th. Sitting up, joints free from pain and but slightly swollen. He is able to extend and flex his leg, has some appetite, and urine is perceptibly clearer. To take the rest of the acid, that is, to one drachm.

March 29th. Saw the patient out-of-doors walking with scarce'y any difficulty. Rheumatism all gone. Prescribed a tonic and left him.

This cure does not in itself prove much for the acid, but it is the plain history of a patient successfully treated in a remarkably short time, compared with his former attack and results.

SALICYLIC ACID IN ACUTE RHEUMATISM.

BY D. W. HODGKINS, M. D., OF EAST BROOKFIELD.

APRIL 13th, M. C. G., a young woman of nineteen years, a factory operative, being warm and perspiring freely, sat in an open window until she began to feel chilly. The next day I was called and found her with some fever and complaining of a general aching and soreness, as she expressed it, all through her flesh and bones. Diaphoretics were prescribed. The day after there was more fever, and the left knee was somewhat swollen and painful. She was put on an alka-

line and opium treatment. The next day the other knee, both ankles, and the toes of both feet were affected. The fever was high, and the temperature above 100°. Her limbs were so painful and sensitive that the slightest movement caused her great agony.

It being evidently a case of acute articular rheumatism, I determined to try the salicylic acid. She took the first dose, of five grains, at noon the 17th, and I ordered it to be repeated once in two hours.

April 18th. The affected joints were not quite so sensitive. Fever and temperature about the same as the day before. I ordered salicylic acid, five grains in simple syrup every hour.

April 19th. At noon I found her sitting up in a chair, entirely free from pain, pulse and temperature being about normal. She could move her limbs freely without suffering, although the joints were somewhat swollen. I ordered a continuation of the acid for twelve hours longer, once in two hours.

April 20th. She was dressed and took her dinner at table with the family. I directed that she should take no more of the medicine unless the pain returned.

April 21st. Being called to perform a slight surgical operation for another member of the family, I found her about the house. She said she was well, and assisted in making preparation for the operation. There has been no return of the disease up to this date. After she began to take the acid, all other medicines were discontinued. There was no nausea or disturbance of the stomach whatever. After the dose was increased to five grains an hour there was some dizziness and profuse perspiration, together with increased secretion of urine. The bowels moved regularly without cathartics.

RECENT PROGRESS IN OTOTOLOGY.¹

BY J. ORNE GREEN, M. D.

Diagnosis of Thrombosis and Phlebitis of the Brain Sinuses. — In an analysis of one hundred and fifty-one cases of various authors, Wreden² gives an exact description of thrombosis and phlebitis of the cavernous sinuses, and points out the necessity of a separation, pathologically, of the different cerebral sinuses. He considers that the little practical use which has been made of our knowledge of inflammation and thrombosis of the cerebral sinuses has been due not to the nature of the disease, but to the unscientific use of the cases heretofore reported, in that authors have not properly considered in their descriptions of disease of the sinuses (1) the strict difference between thrombosis and phlebitis; (2) the pathological differences of the cerebral sinuses.

¹ Concluded from page 572.

² St. Petersburg medizinische Zeitschrift, vol. xvii.

Since the publication of this first paper, in which he discussed the differential diagnosis during life between affections of the sinuses of the base and those of the convexity and sides of the brain, he and other observers have confirmed his observations, and he supplements his original article by the report and analysis of two cases, one¹ of phlebitis of the transverse, longitudinal, and cavernous sinuses and jugular vein from otitis, and the other² of thrombosis and phlebitis of the cavernous, petrosal, and transverse sinuses from sarcoma of the nasal cavity.

From these cases the following synopsis of the symptoms of thrombosis and phlebitis is taken.

Thrombosis must be due to mechanical influences which retard the passage of the blood in the sinuses, as (1) a diminution of the propulsive force of the heart (marantic form); (2) incomplete emptying of the right heart in consequence of impeded expansion of the lungs (form due to back pressure); (3) narrowing of the calibre of the sinus in consequence of the pressure of tumors, foreign bodies, etc. (compression thrombosis); (4) coagulations in a number of the afferent or large efferent veins (by extension). It is not accompanied by fever and produces no pyæmic symptoms.

Phlebitis, however, arises (1) from the propagation of inflammatory processes (*per contiguitatem*) from the vicinity of sinuses to their own walls; (2) from direct traumatic injury of the walls; (3) by transference of the phlebitic process (*per continuitatem*) from single large veins that communicate with the sinus. It is accompanied by violent fever and very often gives rise to pyæmic or even septicæmic symptoms.

The history of the case, with the predisposing disease, if any existed, but more particularly the violent fever and the pyæmic symptoms, render the differential diagnosis between the two conditions comparatively easy.

Thrombosis of the cavernous sinus shows itself by a congestion of the vein which empties into it, the ophthalmic, and its branches; these branches are the supra-orbital, muscular and lachrymal, ciliary, anterior and posterior nasal and ethmoid, frontal and infra-orbital. As the result of the congestion of these veins there is on the affected side œdematous swelling of the nostril, forehead, and eyelid, mechanical hyperæmia of the retina, with diminution of vision, and also swelling of the nasal mucous membrane with bloody discharge. If a phlebitis of the cavernous sinus exists, in addition to the above symptoms of congestion from the thrombus, which would almost necessarily be present, there are also the phenomena of irritation and paralysis of the abducens, the ophthalmic branch of the fifth, and the oculo-motorius nerves, due to the swelling of the walls of the sinus and of the neighboring tissues pressing

¹ Archives of Ophthalmology and Otology, vol. iv., no. 1.

² Archives of Ophthalmology and Otology, vol. v., no. 1.

upon these nerves. The affection of the abducens, which lies close to the outer wall of the sinus, shows itself by paresis of the external rectus, causing an internal squint; that of the ophthalmic branch of the trifacial, which lies close to the sinus below and outwards, by headache, especially in the forehead and over the eye (supra-orbital nerve), epiphora (lachrymal nerve), and photophobia (reflex irritation or hyperæsthesia of the optic nerve); that of the oculo-motorius, which lies over the upper and outer wall of the sinus, by paralysis of the upper eyelid with inability to open the eye (ptosis).

Thrombosis of the superior longitudinal sinus shows itself by repeated violent hæmorrhages from the nose, due to the back pressure in the veins of the nasal cavity which empty into this sinus; and also by epileptiform convulsions with loss of consciousness, which Wreden refers to capillary hæmorrhages in the cortical substance of the convexity of both posterior cerebral lobes, brought on by the interference with the blood current from the surface of the brain. The hæmorrhage from the nose Wreden does not consider important in itself, but in connection with the epileptiform convulsions it is very significant. From an analysis of the recorded cases of thrombosis of the superior longitudinal sinus, he finds that all which presented after death hæmorrhages in the cortical substance, as described above, were subject, during life, to epileptiform attacks.

Thrombosis and phlebitis of the transverse sinus show themselves by enormous œdematous swelling of the soft parts in and about the external ear, which has exactly the character of phlegmasia alba dolens; there is also apt to be constant dizziness, even in the horizontal position, and staggering. As the phlebitis extends downwards to the internal jugular vein, the external phlegmonous inflammation spreads from the neighborhood of the mastoid downwards to the clavicle; the point of greatest swelling is along the course of the vein, and there is great tenderness on pressure. As the circulation in the internal jugular vein becomes impeded, symptoms of congestion of the facial vein show themselves by a puffy and swollen condition of the face, which, however, may be only transitory, for the facial vein has so many anastomoses with the branches of the external jugular that a collateral circulation is very soon established. If the phlebitis extends up into the facial vein, its larger branches may become plugged, and there will then be enormous œdema of the face; if the inflammation extends into the finer facial branches, a distinct erysipelatous inflammation, with redness, heat, and vesicles, is developed in the skin of the cheek and forehead.

With phlebitis of the internal jugular vein there is a remarkable dilatation of the external jugular, with a distinct undulatory increase and diminution in fullness, accompanying respectively expiration and inspiration. This phenomenon is usually only temporary, and depends on the blocking of the collateral circulation.

Clonic and tonic spasms of the sterno-cleido-mastoid and trapezius muscles may result from an irritation of the spinal accessory nerve in the jugular foramen when pressed upon by a thrombus of the bulb of the jugular vein.

Thrombosis and phlebitis of the superior petrosal sinus cause great congestion in the labyrinth of the ear, with subjective noises, deafness, and especially a great diminution or total loss of perception of sound through the bones (bone conduction).

From the direct connection of one sinus with another it would not be expected that any one set of symptoms would alone be observed, and the analysis of Wreden's cases is therefore of great interest in showing the development of one series of these phenomena after another, as the disease extended from the cavernous to the petrosal and transverse sinuses, and thence to the internal jugular and facial veins.

The intimate connection between the ear and the transverse and superior petrosal sinuses of the brain, through the posterior temporal vein of the diploe and through the petrosal-mastoid vein, make Wreden's investigations valuable in otology.

The latter part of his last paper is taken up with a discussion on the value of the thermometer in the diagnosis of the cerebral complications of purulent otitis, but the observations are as yet too few to allow of any rules being deduced from them.

ZIEMSEN'S CYCLOPÆDIA.¹

WE are glad, as usual, to welcome the appearance of another volume of this great work. The subjects treated of in it are hardly so generally interesting as those in some of the other volumes, but are no less ably handled. Diseases of the nose, pharynx, larynx, trachea, and bronchi, together with those of the pleura and croup, constitute the programme. There is much in the earlier chapters that will be interesting and valuable to the general practitioner, who is often too much inclined to look on these parts as the domain of the specialist. Steiner's paper on croup will disappoint those who look for nice distinctions between it and diphtheria. The heading is *Laryngitis Crouposa et Diphtheritica*. After giving the distinction that the exudation of croup is superficial to the mucous membrane and that of diphtheria is in its substance, the author admits that the two processes often coexist or run into each other, and that no sharp line can be drawn between them either anatomically or clinically. Indeed, his meaning is not always perfectly plain, as, for instance, when he states that "a secondary form of croup, and one justly to be feared, is that which often accompanies epidemic diphtheria." As to treatment, he is an advocate of early tracheotomy, and thinks that when properly per-

¹ *Cyclopædia of the Practice of Medicine*. Edited by DR. H. VON ZIEMSEN. Volume IV. Diseases of the Respiratory Organs. New York: Wm. Wood & Co. 1876.

formed the operation "may be a safeguard against the further spread of the croupous process." The improvement in his results since he has been in the habit of operating certainly is in favor of his views. Fraentzel's article on diseases of the pleura is deserving of great praise. We notice that he does not appear to have met with the curve of the line of dullness in certain stages of effusion, as it is described by Dr. Ellis quite independently of Damoiseau, who wrote on it in the *Revue Médicale* of 1843. The patient, he says, being in a semi-recumbent position, the fluid accumulates, as is natural, behind and then extends forward. "If such a patient be raised in bed, we generally remark a considerable difference in the situation of the dullness, since it naturally assumes a lower limit posteriorly, while it rises higher at the side and in front." Later, in speaking of larger effusions, the patient being apparently in the semi-recumbent position, he says, "The area of dullness, corresponding exactly to the position which the fluid must assume in the pleural sac, in accordance with simple physical laws is always limited by a curved line, the concavity of which is turned upwards and forwards towards the sternum." We are glad to see full justice done to Dr. Bowditch for his great merit in bringing paracentesis into common practice. The author does not attempt to conceal the tardiness with which it was accepted in Germany, which has been behind many other countries in appreciating this treatment. We hesitate to add the well-deserved praise of the translation and mechanical execution of the book, as the commendation is becoming monotonous.

THE DETERMINATION OF THE REFRACTION OF THE EYE WITH THE OPHTHALMOSCOPE.¹

THE adaptation of Rekoss' disk to the ophthalmoscope which Dr. Loring introduced in 1869 first made it possible to employ the upright method of examination of the eye with ease, and without an expenditure of time and patience as annoying to the patient as to the physician. The rapidity with which this method has since been adopted shows plainly enough the general recognition of its value. And the numerous modifications of the instrument which have been made both in this country and in Europe (none of which modifications, however, not even those made by Loring himself, are, so far as we have seen, an improvement on the original) offer evidence in the same direction.

One of the advantages offered by the direct method, and a very important one, is that by its aid the refraction of the eye may be readily measured with at least a very near approximation to accuracy. While it cannot supersede the test by glasses, it often considerably shortens that sometimes tedious process, is of much value to control the results thus obtained, and frequently allows the use of atropine, otherwise necessary, to be dispensed with, to the great convenience of the patient.

Until the publication of the brochure before us there has been, however, no

¹ *The Determination of the Refraction of the Eye with the Ophthalmoscope.* By EDWARD G. LORING, M. D. New York: Wm. Wood & Co. 1876.

satisfactory description in English of the principles and rules which govern the determination of the refraction of the eye by the ophthalmoscope. The author is to be congratulated for having now supplied this want in a thoroughly sufficient manner. The explanations given are clear, practical, and simple, at the same time not lacking in completeness, and no one need be deterred from the study of the subject as here presented by a dread of mathematical formulæ, their introduction having been carefully avoided.

After some plain general directions concerning the employment of the ophthalmoscope by the direct method, and a description of ophthalmoscopes suitable for the purpose, the main portion of the work is devoted to the manner of estimating refraction by this method, and a few cases are briefly related in illustration. Tables are also inserted by which the amount of an elevation or depression of any part of the fundus of the eye may be immediately calculated. Chapters are added on determination of refraction by the mirror alone, and by the inverted image, means which may be of use in some cases as giving a rough estimate of the refractive condition of the eye, but not to be compared with the upright image for exactness.

The brochure deserves a warm recommendation.

O. F. W.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

CHARLES W. SWAN, M. D., SECRETARY.

THE annual meeting was held at the house of DR. MINOT, January 8, 1876, the president, DR. HODGDON, in the chair.

Abortion, Retained Placenta, and Dangerous Flooding. — DR. SINCLAIR reported the case, which he first saw on the day of the meeting. The patient had been for three weeks under the care of a medical man not a member of the Massachusetts Medical Society. At the beginning of that time, at the fourth month, she had aborted, but the placenta did not come away. Twenty-four hours ago there was tremendous flooding, but her attendant did nothing to relieve her. When Dr. Sinclair saw her he found the uterus filled with what felt like a large polypus. On removal it proved to be the placenta, in a somewhat decomposed condition. The patient had lost a great deal of blood, she was very pale, and had a very rapid pulse. Dr. Sinclair remarked that it was very poor practice to allow the placenta to remain in the uterus without an effort to remove it. If it does not come away for two months, it will still come with hæmorrhage.

DR. BUCKINGHAM, referring to matters touched upon at the previous meeting, mentioned the case of a patient forty-four years of age, whom he had recently attended in confinement, who in 1873 went three months without menstruating and at the same time had morning sickness. The catamenia then returned, and continued regularly till the summer of 1874, when a similar omission occurred; after this there was regular menstruation till eleven or twelve months ago. This was the first patient in whom he could get no placental souffle, although he had searched for it repeatedly. The foetal heart was very distinct.

Hæmatocele. — DR. MINOT reported the case. The patient, a widow twenty-five years old, entered the Massachusetts General Hospital May 18, 1875. She was a prostitute, but of the more decent sort. She had one living child, four years old; no pregnancies had occurred since. No cause was known for the present disease other than that, a week before her entrance, she took some purgative medicine which acted several times; soon after this she had severe pain in the abdomen, as she said, "in the womb." This pain continued at the time of her entrance. The abdomen was distended and very tender, especially in the left iliac region and over the pubes. There was fever with prostration, but no vomiting. The patient lay with the limbs extended. The catheter was required. The catamenia were present at the time of the patient's entrance; they also recurred about four weeks afterwards.

Above the pubes was a hard, smooth, tender tumor, extending to within two inches of the navel. By the vagina a tumor was also felt behind the uterus; it was somewhat irregular, hard, and not fluctuating. The sound showed the uterus to be in front of the latter tumor, and not connected with it. The tumor increased considerably in size for several weeks.

June 7th the tumor was punctured, per vaginam, and some fluid blood was drawn from it by an aspirator. A knife was then passed in, alongside the needle, and a free opening was made, from which a large quantity of offensive blood, mixed with clots, escaped. The cavity of the hæmatocele was syringed out thrice daily with solutions of permanganate of potash and of carbolic acid. The patient improved daily in all respects, and began to sit up June 21st.

The next evening, while the house-pupil was syringing the cavity, the patient suddenly uttered an exclamation of pain, and said something had given way within her. No more force had been employed than usual, and the opening was large enough to allow a free regurgitation of the injection, most of which, on this occasion, was found in the bed-pan. Collapse immediately ensued, and the patient died early the next morning.

DR. FITZ showed the pelvic organs. He stated that chronic fibrous adhesions were found between the small intestines, the cæcum, and the sigmoid flexure; in addition, numerous recent fibrinous adhesions from acute peritonitis were present. The peritoneal surface of the descending colon was stained superficially of a brown color, and a similar staining of some of the adhesions was observed, evidently from the fluid used for injection.

On raising the small intestines from the left hypogastric region, an opening was found, one fourth of an inch in diameter, leading into the retro-uterine hæmatocele, which was as large as an infant's head. On the edge of the opening were recent adhesions, and through it there exuded a reddish-yellow fluid. The inner surface of the hæmatocele was rough, of a dark, bluish slate color; it could be readily detached as a coherent membrane, and the cavity contained a somewhat offensive, dirty-gray, soft mass, apparently disintegrating blood-clot. Firm trabeculæ extended across the cavity at certain parts.

Between the uterus and the bladder a circumscribed cavity was seen, as large as the fist; it contained a clear yellow fluid. The walls of this cavity were smooth and shining, apparently formed from the somewhat thickened peritoneum, united laterally and above by old adhesions, of which the former were œdematous.

The specimen, apart from its clinical interest and importance, was of considerable value as presenting the simultaneous antero and retro uterine changes. Both are apparently due to a similar cause, an antecedent peritonitis, from which cyst-like cavities have resulted, in one a clear yellow fluid being found, in the other blood, evidently of secondary origin.

Bixby's Double Trocar and Canula. — DR. MINOT exhibited an instrument invented by Dr. George H. Bixby; it consisted of a long, cylindrical, slightly curved canula, divided longitudinally by a partition, each half containing one of the leaves of a split trocar, whose points unite again beyond the extremity of the tube. The halves of the tube diverge at the proximal end, as in an ordinary double catheter. When the trocar is withdrawn, after puncturing a cavity, the double canula is left in place, to be used for washing out the contents of the sac. Eyelets upon a sliding frame, which may be fixed at any given point on the tube by a set-screw, serve as points of attachment in case the instrument be used as a drainage tube.¹

DR. MINOT remarked that his case was almost identical (except the unfortunate issue) with one recently reported by Dr. F. Gordon Morrill.²

DR. SINCLAIR said that four years ago he operated, for Dr. J. E. Walker, upon an hæmatocele by making a large incision and thoroughly washing out the cavity, three weeks after the accident took place. The patient did well.

Diseased Placenta. — DR. MINOT reported the case of a lady, forty years old, who had had seven living children and seven miscarriages, the last of which occurred ten days ago. The child had been dead for some time before its birth; no motion had been felt for many weeks. The specimen, with the unbroken membranes, was handed to Dr. Fitz.

DR. FITZ said that he had found the placenta shriveled and atrophied. The maternal surface was much thickened and studded with numerous yellow nodules, scarcely any of the normal placental tissue remaining. The asserted characteristic histological changes were not so marked as in other specimens recently described. The changes in the bones of the fœtus, also, were less characteristic. The grayish-yellow patch between the cartilage and the bone was very distinct but regular, and the epiphyses separated very readily.

DR. MINOT said that the case was interesting because the mother was a very healthy woman, and was never known to have had syphilis. She has a living child two years old, perfectly healthy, but very small, weighing, when born, but two pounds. He thought it singular that another abortion should follow the birth of so healthy a child. The mother is nervous in temperament. The father also was presumed to be quite free from syphilitic disease.

DR. HODGSON, who had seen the patient professionally, stated that he had found no evidence of uterine disease at the time of the miscarriages.

DR. STEDMAN said that he had recently delivered a woman with a placenta similar to that exhibited to the society. The patient was young, stout, greatly swollen, had severe headache and diarrhœa, and her urine contained very many hyaline casts, and deposited, on boiling with nitric acid, half its bulk of coagulated albumen. The child was born with one steady, crowding pain, which

¹ For a fuller description, see the JOURNAL of November 18, 1875, page 575.

² JOURNAL, December 30, 1875, page 762.

lasted an hour after the waters broke, and was dead from this cause, the uterus acting as if under the influence of ergot, which had not been given. The placenta was one third made up of caseous nodules. There was no reason to suspect syphilis in this case. The histological structure of the placenta was not the same as in cases of so-called syphilitic placenta. The child was born at the eighth month, but its development did not appear to have been hindered by the disease of the placenta. The patient did well, albumen and casts having disappeared from the urine by the tenth day after delivery.

Dysmenorrhœa. — DR. LYMAN spoke of the difficulty of managing the different forms of dysmenorrhœa, and enumerated the various remedies now and formerly in vogue, none of which can be relied on with any confidence, and most of which are proved by experience to be worthless.

DR. DRAPER mentioned the case of a patient, the mother of two children, whose dysmenorrhœa, unrelieved by child-bearing, had been mitigated by suppositories containing from one third to one quarter of a grain of the extract of belladonna, repeated till the relief came or the physiological effects of the drug became manifest. Dry throat and dilated pupil had been produced within six hours of the application, but the relief to the pain had usually come before the occurrence of these symptoms.

DR. LYMAN said that he had formerly used belladonna suppositories, but he had found more effect from injections of hot water.

Case of Peritonitis, with Symptoms of Pyæmia and Mania, the Result of Criminal Abortion. — DR. MINOT said he had seen with Dr. G. H. Herrick, of Charlestown, a married woman, about twenty-six years of age, who had had an operation for procuring abortion performed, December 22d, by a woman. The next day she had chills, pain in the belly, fever, and vomiting; and in the night she aborted, the whole ovum coming away. She was between eight and twelve weeks pregnant. Dr. Herrick saw her for the first time the next morning, December 24th, and found symptoms of peritonitis. On the evening of the 25th she began to have pain and tenderness in the right shoulder, and soon afterwards pain and tenderness in the front of the right leg. There was delirium.

When Dr. Minot saw the patient, December 26th, the pulse was at 124; abdomen distended, extremely tender, resonant; knees drawn up; skin hot; mind clear. She complained of pain in the abdomen, right shoulder, and right leg. The shoulder was very tender and hot. At about the middle of the right tibia, near its outer edge, was a red, painful, and tender swelling about two inches in diameter. There was no fluctuation. There was no tenderness about the right knee, thigh, or groin. The uterine discharge was much diminished, and offensive. Dr. Herrick's treatment consisted mainly in opiates, with fomentations and nourishing diet, etc.

This patient afterwards improved in all respects, but on the 31st there was a relapse, a return of fever, several new swellings, delirium which increased, and she was wildly maniacal on the 1st, 2d, and 3d of January, and had no sleep. On the evening of the 3d, after large doses of chloral, she began to sleep, and continued to do so for some hours. When Dr. Minot saw her the second time, January 4th, she was rational, with a pulse of 108, moist skin, and a prospect of improvement.

The following notes of the case were subsequently furnished by Dr. Herriek : "The patient continued to improve, and on January 8th the pulse was 92, and the temperature 100.5°. The next day an abscess which had formed on the left fore-arm was opened. She complained of 'canker' in the mouth, and upon examination I found the tongue, mouth, and fauces covered with aphthæ. This continued to grow more severe, resembling a 'nursing sore mouth,' till January 14th, when injections of beef-tea, milk, brandy, together with her medicines, quinine and iron, were resorted to, as she could not take anything into her mouth. Chlorate of potash was used in a steam atomizer, and afforded some relief. The pulse had risen to 126, and the temperature to 103.5°.

"She continued about the same till January 20th, when her mouth began to improve, and by the 25th she took nourishment into the stomach. Injections of tincture of opium had been given every night, to produce sleep. The temperature had dropped to 100°; pulse 102. The right shoulder had been increasing in size, and, fluctuation being detected, on the 2d of February it was opened, and a large quantity of pus was discharged. Another abscess having formed on the inside of the right tibia (a different location from the first swelling on the right leg), it was opened February 8th.

"February 12th. She is now taking nourishment freely, with iron and quinine. Digestion good; pulse 94; temperature 99.5°. She is rapidly improving; the discharge from the abscesses is slight, with no indications of more formations."

The following were elected officers of the society for the ensuing year:—

President, Dr. R. L. Hodgdon; Vice-Presidents, Drs. C. D. Homans and W. C. B. Fifield; Treasurer, Dr. W. L. Richardson; Recording Secretary, Dr. C. W. Swan; Corresponding Secretary, Dr. Hall Curtis; Prudential Committee, Drs. W. W. Wellington, A. D. Sinclair, C. E. Stedman, William Ingalls; Publishing Committee, Drs. B. E. Cotting, F. Minot, F. W. Draper.

THE STATE BOARD OF HEALTH.

THE seventh annual report of the board bears witness to a continuation of the laborious and intelligent investigations which have made it the pride of the commonwealth. The present volume is remarkable for the large number of fine charts, most of which serve to illustrate the papers on pollution of rivers, drainage, and water supply. Among the shorter papers we notice a very excellent one by Dr. Bowditch entitled *Sanitary Hints*, the object of which is to enforce on the public the advantages of attending to simple, almost self-evident sanitary principles. Dr. A. H. Nichols gives a very readable and instructive account of an epidemic caused by impure ice. It occurred in a hotel at Rye Beach in the summer of 1875. The symptoms were abdominal pain, purging and vomiting, with fever and general, though not very severe, constitutional disturbance. It was limited to the guests at the hotel in question, and the cause for some time baffled detection. It was at last traced to the ice, which was cut from a nearly stagnant pond, foul with marsh mud and decomposing sawdust, which latter came from two neighboring mills. Dr. F. W.

Draper gives a very valuable paper on the registration of disease. Mortality returns, as he shows, are not sufficient, or rather are quite inadequate to show the state of health of a district. As he justly remarks, "An entire hamlet may be smitten by an epidemic which makes no impression on the bills of mortality. The schools of a township may be forced to take an unseasonable vacation by a general invasion of whooping-cough, which may cause a comparatively small number of deaths. Mild scarlatina, or diphtheria, or even small-pox may sweep through a village and be the occasion of only a few funerals. On the other hand, an exceptionally severe outbreak of infectious disease may be attended with a fatality out of all proportion to the number sick, and thus become the source of erroneous inferences. So that it seems eminently desirable that a registration of diseases should in some way be put into operation, not to take the place of mortality-registration, but to supplement it."

This matter seems to us of importance in discussing the question recently raised whether "unseasonable" seasons, as a warm winter or a cold summer, are, as has been lately asserted, more healthy than ordinary ones. This assertion has been made on the strength of mortality returns, and is a good instance of the untrustworthiness of statistics. A very cold winter carries off the old and the feeble, those who have but a slight hold on life, especially in the poorer classes, but we have no doubt that records of all cases of sickness would show that the old opinion as to the unhealthiness of a warm winter is perfectly well founded. Arrangements were made to give Dr. Draper weekly accounts from all parts of the State, and while the experiment was in progress these tables formed an interesting part of the last page of the JOURNAL. We hope their usefulness is well enough established to permit their resumption.

The great work of this volume is the special report on (1.) The Pollution of Rivers, by Prof. W. R. Nichols. (2.) The Water Supply, Drainage, and Sewerage of the State from a Sanitary Point of View, by Dr. Frederick Winsor. (3.) The Disposal of Sewage, by Dr. C. F. Folsom, concluding with a summary and recommendations. We cannot now discuss these very comprehensive and able papers, but hope to do so on another occasion. We wish, however, to lose no time in indorsing the recommendations of the board, which are as follows:—

"I. That no city or town shall be allowed to discharge sewage into any water-course or pond without first purifying it according to the best process at present known, and which consists in irrigation; provided, that this regulation do not apply to the discharge from sewers already built, unless water-supplies be thereby polluted; and provided, also, that any intended discharge of sewage can be shown to be at such a point or points that no nuisance will arise from it.

"II. That no sewage of any kind, whether purified or not, be allowed to enter any pond or stream used for domestic purposes.

"III. That each water-basin should be regarded by itself in the preparation of plans of sewerage and water-supplies.

"IV. That accurate topographical surveys be always made of all towns before introducing water-supplies or sewers.

"V. That steps should be taken, by special legislation, based upon investigations and recommendations of experts, to meet cases of serious annoyance arising from defective arrangements for the disposal of sewage.

"VI. That irrigation be adopted, at first experimentally, in those places where some process of purification of sewage is necessary; and that cities and towns be authorized by law to take such land as may be necessary for that purpose.

"VII. That every city or town of over four thousand inhabitants be required by law to appoint a board of health, the members of which shall be required not to hold any other offices in the government of their city or town.

"Finally, the board feel that, in the present state of our knowledge, sweeping laws for the general and immediate purification of all our streams would be hardly justifiable, and that they are not called for by the present condition of our rivers.

"They hope to continue their investigations during the present year, for which no special appropriation will be needed."

We have received a summary of the work done by the board during the seven years of its existence, prepared by Dr. W. L. Richardson, which is eloquent in showing by its concise and business-like statements the debt of gratitude which the community owes to the board. The benefits to the public in the matter of the slaughtering and rendering business alone, together with the great success of the Brighton abattoir, are more than equivalent to the entire sum so far expended. It is greatly to be hoped that no short-sighted economy, which is often but the mask of malice, will be allowed to diminish the advantage and credit that the State receives from the Board of Health.

HOMŒOPATHY IN THE UNIVERSITY OF MICHIGAN.

THE interesting letter which we publish to-day gives a full account of the defeat of the faculty and its party at the recent annual meeting of the Michigan Medical Society. The defeat must be called overwhelming; the election of Dr. Sager to the presidency is an emphatic rebuke, and the proposed law excluding graduates of Ann Arbor from membership will be a deathblow to the school. The course of the society is in accordance with the views we have expressed from the beginning of the affair, and we believe it is right. Though we have condemned the action of the faculty, we have always acknowledged that its members were placed in a very difficult position, and some, at least, of them have our sincere sympathy. The plea, however, that they were doing good by exposing the errors of homœopathy strikes us as silly, and its force is weakened by the fact that lectures on theory and practice and therapeutics were given respectively at the same hours in the two departments. As every one knows, homœopathy is far more a fraud than a delusion, and it is a waste of breath to prove to one intending to follow it that the administration of the millionth part of a drop of moonshine is useless, unless we can prove also that it does not pay. The fallacy of the plea is further shown by the fact that certainly one half of the homœopaths in this country who possess degrees obtained them at regular medical schools.

The resolutions condemning the interference of government with medical affairs have our warmest approval. We are surprised and shocked to find certain medical journals advocating state examining and licensing boards. We cannot conceive how any one who respects his profession can be willing to entrust its interests to the tender mercies of political ignorance and corruption. We trust that the misfortune of the University of Michigan will serve as a warning.

HEALTH OF PHILADELPHIA.

DR. WM. PEPPER, the medical director of the centennial exhibition, has issued a circular on the sanitary condition of the city and grounds. Having compared the average death-rate per thousand of Vienna, New York, London, and Philadelphia during five years, and of Berlin and Paris during four, he finds it lowest in Philadelphia, where it is 22.27, that of Vienna being 31.42, and that of both New York and Berlin being over 29.

"While thus showing an average rate of mortality more favorable than that found in any other city containing over 500,000 inhabitants, Philadelphia has recently (1874) attained a degree of healthfulness almost unparalleled, namely, with a population at that time of 775,000, the number of deaths was but 14,966, giving a death rate of only 19.3 per thousand. These very favorable results are largely due to the abundant and cheap water-supply, and to the opportunities given, even to the poorest citizens, for the enjoyment of pure country air in the great Fairmount Park, which contains 2991 acres. The extent to which this is valued by the citizens may be inferred from the fact that during the year 1875 the park was visited by over eleven million persons."

Dr. Pepper goes on to say that the climate of Philadelphia is also, on the whole, a favorable one, although presenting many of the peculiarities common to inland localities; the mean annual temperature of the last ten years being 53.73° Fahrenheit, and the average annual rain-fall about forty-five inches.

He gives also the following table of temperature during each month of the last ten years, with the remarks we print after it:—

January	32.72° F.	May	63.24° F.	September	67.72° F.
February	33.12 "	June	73.54 "	October	56.03 "
March	39.16 "	July	78.74 "	November	43.34 "
April	53.36 "	August	75.92 "	December	33.92 "

"It is thus seen that only during the months of June, July, and August does the mean temperature rise to a high point. During this period there are very rarely any prevailing epidemic diseases; and the chief mortality occurs among children, especially among the poorer classes.

"The health of Philadelphia at present is unusually good. Timely efforts have been made to secure an abundant water-supply to meet the great increase in the demand which must be expected this summer as compared with previous years. Constant watchfulness will be exercised by the authorities to maintain cleanliness, and to avoid or remove every possible cause of disease.

"Within the exhibition grounds a rigid sanitary inspection will be main-

tained, under the control of the Bureau of Medical Service; and thus a guarantee will be afforded that no cause of infection or disease will be allowed to occur through neglect of this important duty."

It is greatly to the credit of the commission that the grounds have been put under such capable management.

MEDICAL NOTES.

— We read in the *Sanitary Record* of London that new investigations into the nature of tea exposed for sale have been instituted by Dr. Saunders, the medical health officer of the city. "The doctor succeeded in obtaining five samples representing five separate importations, and each sample is described as being 'unsound, adulterated, and unfit for human food.' One sample consisted of the well-known 'Maloo mixture,' which is prepared chiefly from redried exhausted tea leaves. Another sample consisted of tea dust, mixed with a variety of foreign ingredients, such as sand and coloring substances. A third sample, which was foul and putrid, was adulterated with quartz, foreign vegetable matter, and metallic particles. The next sample, which, it appears, was dirty-looking stuff, contained stones as large as peas; and the fifth sample represented a part of a cargo of tea saved and redried from the Gordon Castle, which was wrecked off the coast of Portugal about eighteen months ago." Perhaps analyses in this country might furnish equal instructive results.

— The transactions of the thirtieth annual meeting of the Ohio State Medical Society, June 15 to 17, 1875, contain various addresses and papers. The address of the retiring president, Dr. W. W. Jones, of Toledo, calls attention to some of the means within the control of the society for promoting the progress of medicine. Reforms in medical education, which he maintained must begin with practitioners as well as with the schools, were alluded to, and attention was directed to the rules governing the practice of special departments of medicine, to the importance of observing and recording atmospheric and topographical influences in the production of disease, to the beneficent influence of sanitary science in increasing the average duration of human life and lessening the number of days of sickness. Among the papers read, some of which were followed by a prolonged discussion, were *The Use of the Aspirator in Retention of Urine*, by Dr. P. S. Conner; *An Inquiry into the Mortality from Consumption in Life Insurance*, by W. B. Davis, M. D.; *Puerperal Blindness*, by W. J. Scott, M. D., and on *Railroad Locomotor Ataxis*, by the same author; *Sympathetic Ophthalmia*, by E. Williams, M. D., in which the writer endeavored to inculcate the importance of a timely enucleation of the diseased eye to save the other from threatened disease. These, with other papers, make a bound volume of more than two hundred pages.

— The operation of gastrotomy has recently been performed upon the case known to the Paris public as "*L'Homme à la Fourchette*," the man with the fork. Regarding his history and the recent operation, the correspondent of *The Lancet* of April 22, 1876, says that about a year and a half ago the man,

whilst showing his skill at introducing a whole fork into his gullet, suddenly swallowed it. It could not be extracted from the œsophagus, and finally found its way into the stomach. After this the fork could be felt lying lengthwise in the stomach. Short trials of various means were made to extract the instrument upwards, but all these attempts were soon renounced as useless and possibly mischievous, and the patient was sent into the country to his friends. After a time he returned to Paris. His general condition was satisfactory, but from time to time various local symptoms of inflammation occurred. About two months ago Dr. Labbé thought the proper time had come to attempt gastrotomy. Accordingly, applications of caustic were made to insure adhesion between the stomach and skin. The operation had, however, to be postponed on account of the illness of the patient, but a week ago it was performed. The fork has been extracted, but great difficulty attended its removal, and the operation proved to be a most arduous and anxious one. Notwithstanding the attempts that had been made by the application of caustics to secure adhesion of the stomach to the abdominal walls, the peritoneal cavity had to be opened. At the last report the patient was doing well.

— By invitation of the Centennial Commission of the International Medical Congress, D. A. Morse, M. D., Professor of Nervous Diseases and Insanity in Starling Medical College, will respond to the question, "Is there an insanity without delirium?" (*Manie sans délire. La manie peut-elle exister sans une lésion de l'entendement?*)

— *The Practitioner* for April, 1876, reports from the *Dublin Journal of Medical Science* the treatment by Dr. Foot, of the Meath Hospital, of a remarkable case of obesity developing suddenly in a boy seventeen years of age. The treatment adopted was so far successful that he was restored from a condition of absolute helplessness to the use of his limbs, was enabled to stand and walk without assistance, and to make himself useful in light work. The medical treatment adopted consisted chiefly in the administration of large doses of liquor potassæ up to two drachms three times a day, and of the liquid extract of the fucus vesiculosus; these remedies were used separately and in combination. The cause of the rather sudden development of adipose tissue about the time of puberty appeared to be connected with an arrest of development of the testes. The age of the lad was seventeen, his height four feet five inches, his weight nine stone two and a half pounds. The fat was chiefly accumulated round the body, neck, and face. The circulation was feeble. The testes were not larger than peas, and the penis did not exceed that of a child a year old. He was very sensitive to cold. The smell of the skin was very offensive from the presence of volatile fatty acids. The potash produced diarrhœa. Notwithstanding the diminution in the amount of fat produced by its use, the patient left the hospital one and a half pounds heavier than on his admission, apparently owing to the formation of muscle.

— Carbolic-acid spray in throat affections is highly recommended by James Cuthill, M. D., in *The British Medical Journal* of April 29, 1876. The writer says that for more than twelve months he has treated all his cases of diphtheria and of ulceration of the tonsils and fauces by means of carbolic-acid spray, except that in some of the more severe instances the solid nitrate of

silver has also been applied. Excellent effects have likewise been attained in relaxation of the uvula and other non-ulcerative conditions, as well as in scarlatinal sore throats. Among the beneficial effects of this method of treatment are the removal of the sickening fetor of the breath and the speedy restoration of the power of deglutition. The strength of the solution may be from one in forty to one in twenty. No spatula is required, the stream of spray being merely directed over the dorsum of the tongue.

— A new operation for the obliteration of depressed cicatrices after glandular abscesses, or exfoliation of bone, is given by William Adams, F. R. C. S., in *The British Medical Journal* of April 29, 1876. The operation consists (1) in subcutaneously dividing all the deep adhesions of the cicatrix by a tenotomy knife, introduced a little beyond the margin of the cicatrix, and carried down to its base; (2) in carefully and thoroughly everting the depressed cicatrix — turning it, as it were, inside out, so that the cicatricial tissue remains prominently raised; (3) in passing two hare-lip pins, or finer needles, through the base, at right angles to each other, so as to maintain the cicatrix in its everted and raised form for three days; (4) in removing the needles on the third day and allowing the cicatricial tissue — now somewhat swollen, succulent, and infiltrated — gradually to fall down to the proper level of the surrounding skin. After the operation the cicatricial tissue is said to always lose its shiny, membranous, and vascular character. The thickening of the cicatricial tissue results from its succulent condition during the three days it remains elevated by the pins, and the inflammatory infiltration at its base.

— As an efficient method in cases of post-partum hæmorrhage of arousing an inert uterus to contraction, Professor Isaac E. Taylor recommends to dip the end of a towel in cold water and smartly slap the hypogastrium with it.

— Pastor Laestadius, of Jockmock, says *The Medical Record*, has undertaken to investigate the subject of the menstruation of Lapland women, for the purpose of showing how much reliance was to be placed upon the statement that they menstruate but once a year. He found that they first menstruated between sixteen and twenty years of age; that the intermediate period was four weeks, sometimes a little more or less; that the menstruation lasted four and at most six days. The Lapland women of whom the inquiry was made claimed that this was the rule with them, as it is in other countries.

— The summer semester of the Vienna university began on the 21st of April. During the past winter semester there were eight hundred and twenty-nine ordinary and seventy-seven special medical students.

— Great anxiety is felt in European countries lest the plague, after an absence of more than two centuries, reappear among them. In Mesopotamia for some time past the pestilence has been present, causing a frightful mortality among its subjects. Recent advices show that in Hillah, seventy-six cases and thirty-four deaths occurred between March 20th and 26th, and sixty-six cases with forty-two deaths from March 27th to 31st, inclusive. At Bagdad, between March 21st and 27th, there were one hundred and nineteen cases and forty-five deaths, and from March 28th to April 1st, one hundred and forty-five cases, with seventy-five deaths. The Ottoman and Egyptian governments of the Levant, the Red Sea, and the Persian Gulf are attempting, by strict quarantine meas-

ures, to prevent the spread of the disease, but these measures have so disturbed trade that merchants and ship-owners are loud in their complaints. The English government has already, through its consul-general in Egypt, informed the authorities there that "her Majesty's government considered the quarantine regulations, as recently exemplified, to be a vexatious annoyance."

It is difficult to conceive of the possibility of the horrors of some of the pestilences of the Middle Ages being reënacted in Europe, and appearing here. Still, nothing is certain but the unexpected, and it imports us to consider what precautions are to be taken even while the necessity of so doing seems almost visionary.

— A pamphlet has lately been lent us which we can recommend as most amusing reading. As a bit of charming nonsense it is equal to Alice in Wonderland. The title is *Homœopathy in its Relation to the Diseases of Females*, and the author is a Dr. Thomas Skinner, of Liverpool, whom our readers may remember as having written some very blackguardly papers on the ether and chloroform question in the English medical journals a year or so ago. Since then he has had grace to find his true career, as no one can doubt who reads the following extract: "By way of illustrating the power of homœopathic medicines over the mind and its affections, I shall give the following examples: A favorite cat of my own had kittens. All were drowned but two, then one was given away, and ultimately the remaining one was given to a friend. The mother of the kittens became *inconsolable*, and went all over the house mourning her loss in unmistakable *tones of grief*, for five days and nights, 'making night hideous' with her cries. One globule of *Ignatia 1 m.* (*Jenichen*) cured her in half an hour, and she never cried again. No one can say it was the effect of faith, confidence, hope, or imagination, whatever it was. I believe it was simply the effect of highly potentized *Ignatia amara*, and to attempt to explain how it acted would be a waste of time, paper, and brain-force." Heaven forbid that we should desire an explanation at such a sacrifice!

— A case of supernumerary testicle is reported to *The British Medical Journal* of May 6, 1876, by F. C. Hewett, F. R. C. S. A soldier, on being examined for transfer, was found to possess three testes, two of which were situated in their normal position and were of moderate size, whilst the third, or supernumerary testicle, was situated about an inch above the testicle of the left side, midway between it and the external abdominal ring, and well in the sac of the scrotum. The two glands were distinct, and movable independently of each other. The supplementary gland was firm, elastic, and about the size of a nutmeg; and pressure produced a sensation similar in it, both to the patient and to the fingers, to that occasioned by squeezing either of the other two. The vessels, etc., of the two glands on the left side united to form a single spermatic cord above the smaller gland, in which, on manipulation with the fingers, two of its constituents, of firmer feel and structure than the rest, could be isolated, being most probably the deferent ducts of the glands. This state of things had existed since the man's earliest recollection. There was no complaint of inconvenience.

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CLINIC.

[SERVICE OF S. CABOT, M. D.]

Disease of Tarsus, with Soupart's Amputation. — Mary Q., thirteen years old, entered the hospital May 20, 1875. Two years and a half before this she fell from a sled while coasting, and one of the runners passed over her left foot. She walked home, and continued to use the foot for several days, when it became painful and swollen. After a time sinuses formed, and a portion of the cuboid bone was removed.

At the time of entrance sinuses communicated with the tarsus below both malleoli and on the sole and dorsum of the foot. The ankle-joint was movable without pain. The patient was cachectic, and a generous diet was ordered and use of the foot prohibited. In December the patient's health was very good, but this foot was smaller than the other, the toes were somewhat drawn up, and five sinuses communicated with the centre of the tarsus.

Under these circumstances operative interference was deemed advisable, and January 1, 1876, Soupart's amputation was performed. This method consists in taking a long internal flap and saving the internal plantar artery. An incision is begun on a level with the scaphoid bone, carried down the inner side to the median line of the sole, from this point along the median line and through the heel as far as the tendo-Achillis. The extremities of this incision are joined by one slightly curved, which passes directly under the external malleolus. The ankle is disarticulated, and the long flap carefully dissected from the bones. The malleoli and articulating surfaces are then sawed. By this method a finely-shaped stump is formed, covered with the thick skin and sole of the foot, and the internal plantar vessels nourish the flap abundantly.

Examination of the foot after removal showed the entire tarsus to be extensively diseased. The patient did very well after the operation, the wound being nearly closed January 31st.

There have been several cases of Soupart's amputation in the hospital during the last year, and a very serviceable stump is formed, to which an artificial foot can be fitted with but little deformity, and upon which the patient walks quite naturally.

Fracture of Both Thighs. — January 29, 1876, Henry S., thirty-four years old, fell a distance of three stories through a hatchway, striking upon a pile of lumber. One half hour after the accident he entered the hospital, and was immediately etherized. The left femur was found to be fractured obliquely just above the middle, and the right transversely at the junction of the middle and lower thirds, and again, obliquely, near the junction of the middle and upper thirds.

Buck's apparatus was applied to both legs, the four extension straps being attached to a wooden cross-bar, from the middle of which a weight of sixteen pounds was suspended. Coaptation splints were applied to both thighs.

February 10th. Patient quite comfortable. Length of legs the same.

February 17th. Left leg was in good position, and caused no uneasiness.

The upper fragment of right leg showed some tendency to ride upwards and outwards, and a long external splint was applied, attached above to a belt which surrounded the pelvis, and below to an elastic band which went around the knee. This splint was thickly padded to within an inch of the extremity of the projecting bone.

February 29th. Both legs in good position and quite comfortable.

March 25th. Eight weeks after the accident. Union seemed quite firm in the left leg, which the patient lifted easily from the bed. There was still flexibility in the lower fracture of the right.

April 1st. Weight removed. Coaptation splints left on the thighs. Both legs seem stiff, but the upper fragment of the left leg bows outward somewhat, and there is a little pain at the seat of fracture. The legs are of equal length.

The severity of the accident and the uninterrupted progress towards recovery are noteworthy. The constitutional symptoms were at no time severe.

Fracture of the Skull. — W. S., twenty-one years of age, entered the hospital February 22d. He was said to have been thrown from a wagon seventeen days previously, and to have struck in the neighborhood of his right ear. Two days after the accident he began to complain of severe headache, soon became delirious, and continued so until he passed into a state of stupor. At the time he was brought to the hospital the patient seemed to be in a deep sleep, and could be but partially aroused. The pupils of both eyes were dilated, and responded imperfectly to light. There was no external wound visible, but the patient winced when the head was touched above the right ear. The pulse was 72, and fair in character; the temperature was 98.7° F. There had been no paralysis noticed at any time. The man was placed in a darkened room, ice applied to the head, liquid diet ordered, and strict quiet enjoined. During the night and the next day, the patient had several attacks of active delirium, each one seeming to leave him weaker.

February 24th. The pupils of both eyes were dilated, that of the right the more so, and there was great intolerance of light. Some opisthotonos was noticed, and expressions of pain were called forth when the neck was pressed upon just below the occipital protuberance. Up to this time the pulse had not risen above 90 beats in the minute, nor the temperature above 99° F.

February 25th. The afternoon temperature was 98.8°. The pulse had become feebler, and had risen to 160 beats in the minute.

February 26th. The patient was very feeble. The morning temperature was 103.4°, and pulse 192. At two o'clock P. M. the temperature had risen to 106.9°; at six o'clock it was 108°, and at half past seven o'clock, just before death, it was 109.6°.

The autopsy, by Dr. Fitz, showed a fracture extending from a point an inch above and behind the right ear, downwards and forwards in front of the petrous portion of the temporal bone to the foramen spinosum, and another making off at right angles from this at about the junction of the squamous and petrous portions, and terminating at the upper part of the sphenoidal fissure. Along the line of fracture was a hæmorrhagic tissue closely attached to the dura. On the inner surface of the dura in the left middle cerebral and occipital fossæ, and also just above the foramen magnum, was a hæmorrhagic false

membrane, distributed uniformly and in patches. There were also occasional small patches of red softening on the surface of the brain. The cerebral substance in general appeared to be healthy.

The length of time elapsing before severe symptoms set in, and the rapid rise of temperature before death, are quite noticeable in this case.

J. E. GARLAND.

LETTER FROM ANN ARBOR.

HOMŒOPATHY AT THE UNIVERSITY OF MICHIGAN.

[FROM OUR SPECIAL CORRESPONDENT.]

MESSRS. EDITORS, — The tenth annual meeting of the state society, which has just closed, has been looked forward to with solicitude by the profession throughout the country, on account of the homœopathic complication in the university. The meeting was a large one. Many valuable papers were read and interesting discussions held. The chief subject of interest to your readers, however, is the one which heads this letter. I am happy to write that the medical profession of Michigan has emphatically spoken, and stands purged of complicity with irregular medicine.

After the customary opening proceedings, a resolution was passed referring all resolutions, letters, and papers in reference to the subject of the medical department of the university, without reading or debate, to a committee of nine, elected by ballot. A number of such papers were so referred.

The committee on membership reported, recommending the admission of a number of new members, among whom were several graduates of the university of the class of 1876. Dr. Eugene Smith, of Detroit, moved that the names of all graduates of the class of 1876 be laid on the table until after the mooted questions on the medical affairs of the university were settled.

Dr. MacLean said that he repudiated the insinuation of Dr. Smith that these graduates had been brought in for the purpose of aiding the faculty.

Professor Frothingham said that he would consider an objection by the society as an outrage. He thought the society was committed by not objecting at the meeting last May. Very likely many students would have gone to other institutions had the society at that time objected to the course of the faculty.

Dr. Hitchcock did not consider that the society had at all committed itself. Twelve months ago the faculty said that they were able to take care of themselves. Now, the society proposes to be heard. He, however, was in favor of admitting the students this year, and did not think the faculty had attempted to rush in friends. Finally Regent Rynd said that to promote harmony he would move to accept all the names except university graduates of 1876.

The resolution was then carried.

During the remainder of the first day's session no further proceedings occurred having to do with the university question.

In the evening, the president, Dr. Brodie, delivered his address, in which he touched upon university matters as follows: —

"At the last session of the legislature, and previous to the late meeting of this society, an act was passed and approved authorizing the board of regents to establish a homœopathic medical college as a branch or department of the university, to be located at Ann Arbor, and the treasurer of the State was directed to pay over to the board of regents the sum of six thousand dollars annually, to be used exclusively for the benefit of said department. In conformity to this law the board of regents have organized a homœopathic department of the university, and one course of lectures has been given."

He neglected to state, however, that this department was simply the addition of two professors, while the professors in the regular department were required to instruct the homœopathic students.

On the afternoon of the second day's session the committee of nine reported through its chairman, Dr. Foster Pratt, of Kalamazoo. The report, after a preamble in which the doctor gave a concise review of the facts in regard to the history of the homœopathic question, embodied the following resolutions:

"*Resolved*, That we are not content with the existing situation of the medical department of the university, because, in our opinion, it is not calculated to maintain or advance medicine as a science, nor is it consistent with the honor or interest of the profession.

"*Resolved*, That a State, under our form of government, cannot successfully teach either medicine or theology, and that the medical profession ought to be its own teacher and the guardian of its own honor.

"*Resolved*, That we regret all legislative interference with the government of the university as unconstitutional, wrong in its principle, and harmful in its results.

"*Resolved*, That section 4 of the constitution of this state society be amended so as to read as follows, namely: 'The resident members shall be elected by vote of a majority present at any regular meeting, their eligibility having been previously reported upon by the committee on admission; *provided*, that no person shall be admitted to fellowship who practices, or who professes to practice, in accordance with any so-called "pathy" or sectarian school of medicine, or who has recently graduated from a medical school whose professors teach, or assist in teaching, those who propose to graduate in or practice irregular medicine.'"

This report was signed by seven out of the nine members of the committee. *The minority report agreed with the majority report on all points except the fourth resolution.*

The society then proceeded to take action upon the resolutions *seriatim*.

Dr. Frothingham, of the faculty, objected to the adoption of the first resolution. He maintained that the medical profession was not a trades union, but was for the relief of suffering humanity. The objects worthy of it are the building up of true science and the teaching to others of the truths of science. If it be our object to reform error, the way is to teach men the truth. As a matter of humanity, what should be our attitude toward homœopathy? Should we say that we will not teach the homœopaths the truth, and so in effect say, Let those who trust in homœopathy bear the consequences?

Dr. Twiss said the resolutions express our dissatisfaction with the course of

the faculty ; we should do more than be dissatisfied, we should express our emphatic disapproval.

Dr. Rynd (member of the board of regents of the university) said that after the legislature had acted as it did, the question was, Should the regents turn the university over to the homœopaths ? Should the faculty, not having had any instructions from the state society, desert their posts ? He maintained that the society should have instructed the faculty.

Dr. Post, of Ypsilanti, said that he was by no means content with the standing of the faculty. The question was whether the faculty had the indorsement of the profession throughout the State. He thought not. As for the pretext of allowing the present state of things to continue on the ground that our duty to humanity required us to teach the homœopaths the truth, he showed that the hours of the lectures have been carefully arranged so that it is impossible for the homœopathic students to hear the lectures on practice and materia medica if they desired to do so. They are studiously kept from hearing the truth.

Dr. Pratt rose to call attention to the fact that the resolutions contain no personal allusions whatever.

Dr. Hitchcock, of Kalamazoo, said, We believe homœopathy to be a baseless humbug and a fraud ; as such it stands in a degraded position. The faculty want us to be missionaries to this humbug, to educate it and make it respectable, to take the ban off which now lies upon it. This society objects.

Dr. Oakley was surprised to find the representatives of the faculty opposing this resolution. They had called upon the society for its opinion and counsel, and now object to a resolution embodying opinions previously expressed by the faculty itself.

Dr. MacLean said that the faculty wished to have the present condition of things undisturbed, as he believed from the results of this year's experience that in two years the faculty would have the homœopathic monster strangled. The homœopathic system cannot stand the comparison.

Dr. Klein, of Detroit (also a member of the state legislature) said, that the society, not being an incorporated body, cannot take any compulsory action in regard to the faculty. On the other hand, the State compelled the regents to establish the homœopathic school. Dr. Klein also called attention to the negligence of the profession in not using its influence with the legislature. The lobbies were beset with homœopaths until the last bill was passed, but none of the regular profession were there.

The first three resolutions were carried by a vote of sixty-three to thirty-one.

The fourth resolution, being in the nature of an amendment to the constitution and by-laws of the society, was necessarily laid over for one year.

A resolution was passed requesting all local societies to send in, before the next annual meeting, their views upon this amendment to the constitution.

On the morning of the third day's session, Dr. Frothingham presented his resignation as a member of the society, couched in such terms that he was repeatedly called to order by members. His resignation was accepted. Dr. Rynd also presented his resignation, which was so offensively worded that it was with difficulty that he was allowed to continue to read it. It was at once unanimously accepted.

None of the older members of the faculty took part in the proceedings, and those members of the faculty who did participate seemed not very desirous to hear the opinion of the profession of the State, and when they heard it did not appear pleased with it.

The society elected Prof. A. Sager for president, who, it will be remembered, resigned his connection with the university on account of the introduction into it of the two homœopathic professors. Equally significant of the views of the society was the election of Dr. Foster Pratt, chairman of the committee of nine, as first vice-president.

It is generally well understood that the present faculty, aided by their friends, among whom were none warmer than the president, Dr. Brodie, have endeavored by every means to prevent such action by the society as has been taken, but the alumni scattered throughout the State, feeling that they have more at stake in their *alma mater* than salaried professors, have voted to wipe out the medical department of the university rather than to have it disgraced and the entire profession injured by such an unholy alliance as has been imposed upon it. The alumni of the university constitute the principal portion of the majority. The secular press of the State has already begun to comment, as might be expected, upon the bigotry and narrowness of the State Medical Society. X.

ANN ARBOR, MICH., May 18, 1876.

At the annual meeting of the Middlesex East District Medical Society, held at Woburn May 10th, the following officers were elected: *President*, W. S. Brown, of Stoneham; *Vice-President*, F. F. Brown; *Secretary*, E. M. Harding; *Treasurer and Librarian*, A. Chapin; *Commissioner of Trials*, J. M. Harlow; *Censors*, F. Winsor, F. F. Brown, A. H. Cowdrey, J. O. Dow, D. W. Wight; *Councillors*, F. Winsor, J. M. Harlow, J. O. Dow; *Reporter and Councillor for Nominating Committee*, F. Winsor. E. M. HARDING, *Secretary*.

BOOKS AND PAMPHLETS RECEIVED.—Transactions of the New York Odontological Society, Regular Meeting, Extra Session, December 20 and 21, 1875. Philadelphia: S. S. White. 1876.

Journal of Social Science, containing the Transactions of the American Association, May, 1876. Boston: A. Williams & Co. 1876.

Dispensaries: Their Origin, Progress, and Efficiency. By the Rev. William S. Sudlum, A. M. New York: G. P. Putnam's Sons. 1876.

Metropolitan Main Drainage. Remarks before the Joint Committee of Improved Sewerage. By C. F. Folsom, M. D.

Peri-Nephritic Abscess in Children, with a Report of Nine Cases. By V. P. Gibney, A. M., M. D. (Reprinted from the American Journal of Obstetrics.)

SUFFOLK DISTRICT MEDICAL SOCIETY.—The regular meeting will be held at the rooms, 36 Temple Place, on Saturday evening, May 27th, at seven and a half o'clock. The following papers and cases will be read: Report of Committee to Nominate Delegates to the American Medical Association. Report of Committee on Rooms. Dr. E. H. Bradford will exhibit Lister's Gauze Dressing. Dr. D. W. Cheever, Ovariectomy; a Third Successful Case. Dr. B. J. Jeffries, The Operation for Squint. A. Young, Experimental Inhalation of Oxygen Gas. A. L. MASON, *Secretary*.

WE received, about two weeks ago, two documents sent anonymously. If the sender is honest in wishing them to do good he will give us his name and address.—EDS.

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CLINICAL LECTURE ON A CASE OF FACIAL PARALYSIS.

BY R. T. EDES, M. D.,

Visiting Physician at Boston City Hospital.

SOME of the most striking points in the case of the young man before you are obvious at the first glance. The left side of the forehead is smooth, while the right is wrinkled, and the distinction becomes more marked when the patient is requested to raise his eyebrows. He cannot close the left eye, though there is much improvement in this respect since you first saw him, a week ago. The corner of the mouth is lower upon the left side, and the whole mouth is drawn to the right. He cannot whistle. Upon examining the throat we find the arch of the palate alike, or nearly so, upon the two sides, but the uvula is strongly curved, with its point toward the healthy side.

The muscles implicated are all supplied by the facial nerve, and their condition shows that the nerve is paralyzed. To get at a complete diagnosis, however, we must inquire whether this is the only nerve affected.

The first pair (olfactory) shows its integrity by his recognition of camphor and peppermint, the right nostril being closed. The second (optic), which is a very important nerve in the study of the condition of the brain, is accessible to direct examination at its outer end, namely, in the optic disk. The ophthalmoscope shows in this case no inflammation of the nerve or disturbance of its circulation.

The motions of the eye are perfect, except that upon the paralyzed side its outward excursion is slightly limited. There is no double vision, no dilatation of the left pupil, and no ptosis, whence we infer integrity of the third (oculo-motor) and fourth (patheticus), with a slight paresis of the sixth, or abducens.

As to the fifth, which, by the way, is quite likely to be involved in the affection which I suppose this to be, we have a history of pain upon the top and whole left side of the head, dating back several weeks previous to the facial paralysis. This still persists, especially in the occipital region, though much less at present. Sensation in the left side of the face is but slightly lessened, although the patient speaks of a numb feeling. Its motor portion is unaffected, as you will perceive by making

him close his jaws firmly and feeling with your fingers the equal contractions of the masseters and temporals upon the two sides.

The auditory nerve, which from its close anatomical relations to the facial we should expect to show some change of function, is unaffected save to the extent of some ringing in the ear. There is no deafness. Dr. Green finds no visible change in the ear connected with the present trouble. The pneumogastric is, so far as we can observe, unaffected, the pulse and respiration being normal.

The tongue is at times protruded slightly toward the paralyzed side, but the deviation is so slight and so inconstant that I hesitate to attribute to it the meaning which it would have if well marked, namely, paralysis of the hypoglossal. In judging of the position of the tongue it should be referred to the median line of the face, and not to the mouth, since from the distortion of the latter a deviation might be supposed to exist when in reality the tongue was exactly straight. So much for the cranial nerves.

Now, if you ask the patient to grasp your hand with his own, you find that the left is much the less powerful of the two, which is not due to a natural difference, since he is in the habit of using his left hand for his work. You notice, however, that there is no impairment of the motions of the hand, which he is able to direct as well as ever. It is simply weaker.

He states that there is no difference between the motion of the two legs, and nothing is noticeable in his gait. He speaks, however, of a numb feeling in the left leg as well as in the corresponding arm. Having made out these points, where shall we locate the lesion?

You notice that we have had to deal with a very complete paralysis of the facial, the orbicularis palpebrarum in particular having been, when you first saw him, almost motionless. Experience has shown that such a paralysis is seldom, some authorities have even said never, connected with a lesion of the higher motor centres, but that the nucleus or more usually some part of the trunk of the facial is the point where the communication is cut off.

A similar limitation is also indicated by the fact, for which I must ask you to take my word, that the paralyzed muscles entirely failed, more than a week ago, to respond to a faradaic current of sufficient intensity to cause contraction of the corresponding muscles upon the other side and the cervical muscles upon the same side. To-day, as you see, the response is decided. The galvanic current has caused, from the first time I used it, — which was not, however, until two or three days after the failure of the faradaic, — a contraction of the muscles elevating the angle of the mouth. This distinction is not observed in paralysis of cerebral origin, where the nerve retains its irritability for a long time.

In the other direction we find that the lesion must be above the gan-

gliform enlargement, since the azygos uvulæ, which we have seen very distinctly paralyzed, is controlled by a branch arising at this point.

A lesion of the nucleus itself of the facial within the medulla oblongata, and nearly limited to it, would account, it is true, for the symptoms on the part of this nerve; but such a lesion is so rare, and the chances of its being so strictly limited, and especially of its not producing *crossed paralysis*, that is, paralysis of the limbs on the other side, are so exceedingly small, that we may leave it out of the account. A lesion of the pons higher up and on the other side might give rise to symptoms similar to those observed here, and we can hardly exclude such a lesion with certainty. The improbability, however, of such complete paralysis of the facial affecting so little except this nerve is great, and I shall accordingly neglect this hypothesis and assume that the nervous current from the motor centre to the facial muscles is interrupted above the gangliform enlargement, but outside of the brain. Such a facial paralysis as we see in this case is frequently due to the local action of cold upon the side of the face, and this, indeed, is the diagnosis which would naturally be made here at first sight. I do not admit it, however, for the following reasons:

(1.) Want of history of any special exposure. The paralysis, if I am correctly informed, developed gradually. This of itself, however, would have but little value.

(2.) The paralysis of the left azygos uvulæ, pointing to a lesion within the Fallopiian canal. This *may* happen if a rheumatic inflammation affects the sheath of the facial and compresses it in its narrow course, but is not a frequent accompaniment of this form, which usually affects only the branches of the facial *after* their exit from the skull.

(3.) The affection of other nerves, especially of the fifth. Rheumatic paralysis of the facial, especially of the severer kind, such as may be supposed to arise from an inflammation in the region just mentioned, is often preceded by pain in the side of the head and noises in the ear, but is usually of rapid origin, occupying in its development at most but a few days and usually a few hours. In the present case, however, the neuralgia preceded the paralytic symptoms by several weeks.

We have, beside, the paresis of the sixth pair and of the hand.

It is, of course, possible that we are dealing with coincidences, that the paralysis succeeded the neuralgia in time, but bore no relation of effect to cause. It seems more philosophical, however, to assume a common cause, as the probabilities against the coincidence of so many affections, including the paresis of the arm and other cranial nerves, must be very great. This view is confirmed by the progress of the case, which shows improvement both as to decrease of pain and as to increase of motion.

Disease of the middle ear is excluded by the results of direct examination.

Lead paralysis, which in this form would be exceedingly anomalous, but which was thought of from the occupation of the patient (house painter), is excluded by the absence of the blue line from the gums and of lead from the urine, which Dr. Wood was kind enough to examine for me.

The presence of optic neuritis, especially if double, would point very distinctly to the existence of some gross lesion at the base of the brain, and would be very likely to occur if the present case continued to develop new symptoms. Its absence, on the other hand, is of less value as a symptom.

In view, therefore, of the relative frequency of the affections and of the patient's age and possible history, I am led to the diagnosis of a syphilitic growth, probably connected with the dura mater, involving slightly the fifth, sixth, and auditory nerves, while the facial has been almost completely paralyzed, possibly from its sheath being swollen within the canal of Fallopius. With this diagnosis you will perhaps ask me, Why does the auditory, which is so closely connected with the facial from its origin to its entrance into the temporal bone, so nearly escape, and whence the paresis of the brachial plexus? To the first question I can only answer, I do not know, unless because it has a much less dense fibrous sheath, and is consequently less liable, although surrounded by the same morbid product, to take on a syphilitic neuritis. As a matter of observation, facial paralysis is the second most common form of paralysis from syphilis. The first is that of the oculo-motor.

As to the second question, I have the following theory to propose. An ordinary paralysis involving the motor fibres extending between the corpus striatum and spinal cord, and depending upon a lesion situated *at* the nucleus of the facial, would be a *crossed* one, since these fibres do not decussate for some distance lower down, just below the olivary bodies, and consequently those which, at the level of the facial nucleus, are upon the left side of the medulla, are destined to the right side of the body. If the lesion were entirely outside the brain these fibres would hardly be affected at all, or, if they were, the same crossed effect would take place.

There is, however, a form of paralysis sometimes connected with lesions at this point, and occurring upon the same side with them. It is found when the cerebellum is diseased. You have perhaps heard the theory of Luys, which is, in short, that the cerebellum is a sort of relay battery, a reservoir of motor force to be drawn upon by the voluntary motor fibres which are thereby reënforced. When this supply of reserve force is cut off we have, consequently, not an impairment of motion in the way of variety and extent, since the voluntary fibres are still intact, but simply of diminished strength; and this is what we observe in the case before us, as you have already seen. The patient has perfect control

over the movements of the arms, but they are distinctly weaker. You may, it should be said, in many cases when the disease is well marked, have decided tremor and convulsive movements upon the same side with the lesion.

I must, therefore, add to my diagnosis that there is some pressure upon the cerebellum, or its peduncle upon the left side.

How does the history of the case agree with the diagnosis of the nature of the lesion?

I am sorry to say it is not satisfactory. We may have nerve lesions occurring at various stages of syphilis, and among them one of the most common and also one of the earliest is that which we have before us. It has been observed coincidently with the outbreak of syphilitic erythema or of a papular eruption. Usually, however, it is later. When it occurs late in the disease as a tertiary symptom, it is more likely to be due to gummous formations in the brain or in the membranes at its base, and the prognosis is more unfavorable. What the pathological anatomy of the *early* paralysis is, I am unable to say; perhaps a subacute localized inflammation of the neurilemma. This man has a chancre, which has but recently healed under the use of a mild astringent wash; he has enlarged glands in the groin, some five weeks older than the paralysis, and one enlarged gland behind the left ear. His hair has come out; he has had a mild sore throat. This chancre antedates his paralysis, according to his statement, by only three weeks, which as you see, would entirely preclude the possibility of the neuralgic pains being connected therewith, as they begun four or five weeks ago. So that we can hardly suppose this sore, unless of older date than he supposes, to have been the primary lesion of his present disease. He acknowledges several gonorrhœas, and it is of course under these circumstances not impossible that either this sore is older than he thinks, which seems to me the more probable in view of the enlarged inguinal glands, or that some other may have existed. He says himself, with some emphasis upon the last clause, that he "never had any other that he knows of."

These nervous symptoms may come on without any history of cutaneous affection.

I cannot very well help being a little shaken in my diagnosis by this absence of a sufficiently ancient syphilitic history, though I still adhere to it as the most probable.

Fortunately, however, for our patient, the treatment adapted to this diagnosis is so little harmful, although unnecessary, in case the lesion should be of rheumatic origin, that I have no hesitation in putting it in force. It can do harm only by inducing us to neglect more appropriate measures, and this I do not intend shall happen.

The patient is therefore now taking taking ten grains of iodide of potassium three times a day. He will soon have fifteen or more, and if

improvement is too slow in taking place I shall add a small amount of the bichloride of mercury to each dose. The faradaic current will be applied every day to the affected nerves and muscles of the face, if it produces contractions as you saw it do; if not, the galvanic will be used.

I think we may make a favorable prognosis in the case from the absence of strongly-marked constitutional infection, from the early appearance of paralysis, and from the improvement which has already taken place, both in the sensitiveness to the electric current and also in his power of voluntary motion, which, though slight, is very evident and increasing.

UMBILICAL HERNIA WITH CYST OF THE BROAD LIGAMENT.

BY WALTER BURNHAM, M. D.

MRS. S., Orleans County, Vt., consulted me in 1857 on account of an umbilical hernia of twenty years' duration, produced during labor with her second child. She was forty-five years of age and very corpulent. On examination I found an umbilical hernia about the size of a quart bowl, composed of omentum, intestine, and bands of fibrous divisions, which could be seen and felt extending across the sac in various directions. These bands allowed omentum or loops of intestine to crowd through their interstices over the whole surface of the hernia, while they so constricted the sac as to virtually produce so many separate ruptures, each, independently of the others, liable to strangulation.

At different periods during the preceding four years the tumor had become irritated by friction of the clothing, until quite severe inflammation had ensued, involving not only the skin, but also the entire structure of the hernia, and closely consolidating the whole mass by adhesions.

Subsequently an attack of inflammation more severe than any of those preceding was followed by suppuration with sloughing of portions of the integument, cellular tissue, and incarcerated omentum, and threatened strangulation of two loops of intestine. The inflammation, however, quickly subsided, and averted this danger for the time, though it soon recurred with the formation of a second abscess.

In this condition of things it seemed to me that some prompt action was required, and I accordingly advised the reduction of the hernia by dividing those radiating or cross bands through the sac, so as to liberate the incarcerated folds of the bowel.

The patient having been anæsthetized with chloroform, I made, carefully, an incision through the integument, where this was the only hernial covering, and extended it in the various directions required to

bring in reach the constricting bands. These were so closely and extensively adherent to the intestine as to require the greatest care in their separation.

After a patient and persevering dissection of two hours in duration, my efforts were crowned with success and I was enabled to return the intestines into the cavity of the abdomen, free from all adhesions. A large portion of the omentum, however, was unfit to be replaced, and was therefore removed.

At this stage of the operation a greater difficulty awaited me than any I had encountered before. I found myself unable to bring the ragged edges of my wound together, so as to cover the intestines and retain them within the abdomen, and even if I could have done this, the tissues covering the hernia were left in such a condition by the previous inflammation and ulceration as to render extensive suppuration and sloughing very probable.

While examining the omentum where it had been cut, I accidentally discovered a translucent cyst about the size and shape of a quart flask, crowding the bowels towards the left side. This at the time was supposed to be an ovarian cyst, but was probably connected with the broad ligament. It had a long, slender pedicle, almost without blood-vessels, and when tapped poured out about two pounds of a clear, transparent liquid like spring water. The cyst was so delicate and the pedicle so small and so sparingly supplied with blood that any further interference was deemed unnecessary. It has never since shown any tendency to development.

Since that time, in several instances, while making ovarian operations, I have met with these delicate translucent cysts independent of the one for which I was operating, and have treated them with simply a puncture. Where there was no apparent vascular organization I have never known them to refill. They were usually developed from the broad ligament or extremity of the Fallopian tube, though in two or three instances they were connected with the opposite ovary. So this character of cyst is not peculiar to the broad ligament.

I next removed, by an elliptic incision at each side of the first wound, all those structures that had covered the hernia, thus allowing the edges to be adjusted smoothly, leaving only a straight cicatrix on the *linea alba*.

The edges of the wound were then brought together and secured by four deep sutures and by long adhesive strips. Although I had removed a large amount of omentum and had emptied the cyst, still there was so much pressure from the bowels within that they threatened to resist all efforts to retain them in the abdominal cavity, and pressed out by little loops between the stitches, preventing for a time union of the incision throughout. But at length the superior half of the wound

united to the full depth of the abdominal walls, while the lower half closed over outside, but left an open space on the inside, into which the bowels crowded and gave the patient considerable distress. The form of this opening was such as to render any strangulation impossible, and after a few months it became so much diminished in size by cicatricial contractions as to require only the support of a bandage inclosing a pad, to give her perfect comfort and safety.

RUPTURE OF THE RECTUM, CAUSED BY A FALL UPON THE ABDOMEN.

BY FRANK WELLS, M. D.,

Consulting Physician to the Cleveland City Hospital.

A STREET fruit-vender, forty years of age, entered the Cleveland City Hospital on the morning of February 24, 1876, under the following circumstances. About eleven o'clock on the preceding night, in stepping from a platform three and a half feet high, in his little fruit shanty, he stumbled, struck the ground with the soles of his feet, lurched forward, and fell upon the edge of a box, striking his abdomen midway between the umbilicus and the symphysis pubis. He immediately felt "as though something had given away inside," and experienced also a slight pain in the lower portion of the hypogastrium, shooting downwards towards the perinæum. He remained in his shanty all night, and resumed work the next morning. At ten A. M. the pain had become so intense that he sent for a physician, who found him standing up and groaning. His face was neither pale nor flushed; he did not complain of any thirst; the pulse was 130 and thready. He was immediately given a hypodermic injection of morphia and sent to the hospital.

When admitted, he was to a great extent under the influence of the drug. The pulse was 90 and full, the face anxious but not pale. He was groaning with pain, referred to the whole surface of the abdomen, which was tender upon pressure, and slightly tympanitic. He was immediately ordered morphia *pro re nata*, brandy and quinine at frequent intervals, and turpentine stupes to his abdomen. Upon the following morning he passed his urine freely, and had two dejections from the bowels, which were reported to have been natural in consistence, but somewhat dark in color and mixed with considerable mucus. He gradually fell into a state of unconsciousness, the pulse becoming more rapid and feeble until his death, which occurred at noon on Sunday, February 27th.

Autopsy at two P. M. A quantity of purulent serum was found in the abdominal cavity, and an exudation of a thin, gray membrane agglutinating the intestines and neighboring parts. The most remarka-

ble discovery, however, was that of a longitudinal laceration, two inches in length, situated in the central portion of the rectum, through which the fæces were extruding. The liver was cirrhotic.

The chief points of interest about this case are that a blow upon the abdomen should have caused a rupture of the rectum so low down, and that with such a serious injury the patient should have been able the next morning to attend to his work. In regard to the first point, I am of the opinion that the rupture would not have taken place had not the rectum been loaded with fæces. At least, in the absence of all knowledge of the condition of the bowels, I assume this to be the case, since otherwise I cannot imagine that the accident would have been possible.

RECENT PROGRESS IN DERMATOLOGY.

BY JAMES C. WHITE, M. D.

Formation of Epidermis by the Transplanting of Hairs. — Dr. Schweininger¹ reports successful results in inducing cicatrization by transplanting to granulating surfaces hairs pulled out by the roots. Placed upon ulcers they formed as many centres of new epithelial growth, which spread outwards, coalesced, and produced rapid and complete cicatrization. These islands proceeded without doubt from the cells of the outer root sheath, which is continuous with the epidermal cells of the rete mucosum, so that epithelium is here developed from preëxisting epithelial cells.

Distribution of the Nerves in the Cuticle. — Dr. Ditlevsen contributes² the results of his observations upon the skin of the frog, from which it appears that bundles of nerve fibres ascend directly to the very base of the horny layer, where they subdivide and are distributed to ramify singly among its cells, and to reach even the free outer surface of the skin.

Treatment of Pityriasis Capitis by Solution of Chloral Hydrate. — Martineau communicates³ to the Société de Thérapeutique the results of his treatment of this affection in this way during the last two years. Twenty-five grammes of the chloral are dissolved in five hundred of water, and the solution is applied freely to the scalp by a sponge. The patient feels a slight heat and the skin becomes red, but the reaction lasts but a few moments. The itching becomes less on the first day, and sometimes does not return. A few applications generally suffice, and in fresh cases a complete cure may be thus obtained, while in chronic forms great amelioration always results.

¹ Vierteljahresschrift für die praktische Heilkunde. Erster Band. 1876.

² Centralblatt für die medicinischen Wissenschaften, 1876, No. 10.

³ Gazette des Hospitaux, March 4, 1876.

Molluscum Contagiosum. — Professors Bizzozero of Turin and Manfredi of Modena call attention¹ to the observations published by them several years ago, upon which they rest the claim for priority of the view that this affection is not one of the sebaceous glands but a peculiar new growth of epithelial character in the rete, a view lately confirmed by the investigations of Lukomsky and Boeck. (See last semi-annual report on dermatology.)

Inoculation of Varicella. — Steiner² reports the results of his experiments as follows. The contents of the vesicles of varicella are positively inoculable, for of ten attempts two only had a negative result. After inoculation varicella was always produced, variola never. The period of incubation was in all the successful cases eight days. In four cases the general condition of the children during incubation remained unchanged and the eruption appeared abruptly; but in four others a sharply defined prodromal stage of four days' duration was noticed, the symptoms being increase of temperature and rapidity of pulse, with well-marked evening exacerbations, disturbed sleep, weakness, loss of appetite, and decided reddening of the membrane of the mouth and throat. The greatest increase in temperature is generally simultaneous with the eruption. The form of the exanthem is uninfluenced by vaccination, as of the eight children successfully inoculated five had been vaccinated, three had not. Steiner concludes, moreover, that varicella does not protect against variola, as a child died of variola confluens under his observation fourteen days after varicella had run its course.

Poisoning by the Indian Marking Nut. — Dr. Frederick Taylor, of Guy's Hospital, London, reports³ the case. A school-boy painted upon his arm the figure of an anchor with the juice of a fruit which had been given to him by a soldier coming from India. The juice turned black when dry, and would not rub off. After a week there was developed, first upon the arm and later upon the face and thighs, an acute eczematous inflammation in every way resembling that in rhus poisoning, which lasted a fortnight. A playmate was painted at the same time with the juice and was affected in the same way. The fruit was found to be that of the *Semecarpus anacardium*, or marking-nut-tree, belonging to the same family as our poisonous species of rhus, the *anacardiaceæ*. The cells of the pericarp contain a black, resinous juice, which, like the Japanese lacquer, produces an indelible stain on linen, and is used by the natives of India for marking purposes. It is stated that an oil is prepared by boiling the nut, which undiluted acts as a vesicant; and that during the operation of heating the vapors

¹ Centralblatt für die medicinischen Wissenschaften, 1876, No. 7.

² Vierteljahresschrift für Dermatologie und Syphilis, 1875, page 514; from Wiener medicinische Wochenschrift.

³ Medical Times and Gazette, November 6, 1875.

have often been known to occasion "erysipelatous" inflammations. A fatal case of poisoning by it is said by Dr. Taylor to be recorded in the Bombay Medico-Physical Transactions. This case, with the experience of Dr. Chamberlain in China, recently mentioned in the JOURNAL,¹ shows the identity of the acrid principle and of its action upon the skin in the poisonous genera and species of the anacardiaceæ in all parts of the world where they are found.

Treatment of Chronic Eczema by Glycerole of Subacetate of Lead. — Squire in this paper,² of which a reprint has also been published, takes issue at the start with the popular professional dogma of his countrymen, that eczema is a "blood disorder" or some other internal disturbance which must be neutralized or destroyed by some internal means. He believes that, whatever may be the original cause, the disease is perpetuated or recurs by an acquired condition or habit of the integument, and that local remedies are fully sufficient to cure it without medication of any other kind. He had seen reason to believe that preparations of acetate of lead are far more serviceable for such purpose than oxide of zinc, and that they allay the itching, restrain the discharge, and diminish the hyperæmia of eczema. It is more efficient as an ointment, however, than as a lotion. With the Vienna diachylon ointment he was not satisfied, but as the preparation tried by him was "a very uninviting, putty-like substance," it is doubtful if he has ever used it properly made. As grease was objectionable to him for many reasons as an application to the inflamed skin, he was led to adopt glycerine as a better vehicle for incorporation with the lead, as it readily mixes with the fluid discharges of the disease, and may thus be intimately applied to the moist surface, and allows continuous evaporation. If smeared on in moderate quantity three times a day, the parts are kept moist, and only a slight degree of "stickiness" is produced to annoy the patient. No danger is to be apprehended, in his opinion, from the absorption of poisonous quantities of lead; an opinion probably safe in its practical application, but based upon data of very questionable character as presented by the author. The preparation is made as follows: Take of acetate of lead five parts, litharge three and a half parts, glycerine twenty parts. Heat for half an hour in a glycerine bath, constantly stirring, and filter in some heated compartment. The result is a perfectly clear and colorless liquid somewhat more viscid than pure glycerine. This preparation is called the "stock," which may be diluted with glycerine to any strength that the case may require, a drachm of it to the ounce being that usually employed. It should be stated that the author uses the term "chronic" eczema in a sense peculiarly his own, confining its application to those stages "which are

¹ March 23, 1876, page 326.

² Medical Times and Gazette, March 18 and 25, 1876.

characterized by a colorless, viscid sweating from the skin," to eczema rubrum in fact, and excluding all the forms of the affection which are more appropriately called chronic. The term wet or moist should be substituted in the title of the paper. The preparation is to be smeared in moderate quantity over the affected surface about three times a day, and the skin should be "boldly" washed with warm soap and water with a soft sponge previous to each fresh application. The first effect is often an aggravation of the disease, that is, the skin seems redder, moister, and more inflamed, which should not, however, prevent continuation of the treatment in proper dilution.

Internal Use of Tar in Psoriasis. — Dr. McCall Anderson¹ confirms the opinions previously expressed by himself as to the efficacy of tar internally administered in this disease after the failure of arsenic and other remedies.

Morbus Maculosus Werlhofii. — Dr. Rohlfs² expresses his views regarding this form of purpura as follows: The sources of the hæmorrhage are the capillaries of the skin, mucous membrane, and submucous cellular tissue. The blood can also extravasate into the Malpighian layer. It should not be classed with scorbutus or hæmophilie, but should form a separate family of disease. It is probable that it is a special blood dyscrasia, but the chemical proof of this has not been positively determined. It is necessary, and in point of treatment of great importance, to distinguish two classes of the affection, which, although manifesting the same symptoms, are ætiologically quite dissimilar, the asthenic and the sthenic. Both of them tend to relapse. In the asthenic form the cause is to be sought probably in chemical changes in the blood, a hæmorrhagic diathesis. Modified nutrition of the capillaries may also be regarded as a cause, by which the cohesion of their walls is diminished. Taking cold, overheating, anger and other emotional excesses, and errors of diet are to be considered as exciting causes. The hæmorrhages do not necessarily imply rupture of the vessels, as simple transudation may take place. The bleeding may arise from the arterial as well as the venous capillaries, or from both at once. It is not difficult, by proper regard to the pulse and the general condition, to distinguish between the sthenic and asthenic forms, since the first occurs only in full-blooded persons. Nor is it necessary to suppose a change in the condition of the walls of the vessels, since the rupture may be entirely mechanical in consequence of plethora of blood. The treatment of the two forms should be entirely different. Werlhof's method (acids, quinine) is adapted to the asthenic form alone, for, if employed in the sthenic, it would only make the disease worse, or protract it and cause its extension to other organs. In the sthenic form all active interference should be pre-

¹ British Medical Journal. February 19, 1876.

² Schmidt's Jahrbücher, 1876, No. 2, from Memorabilien, 1875, xx.

vented, and no attempts to check the hæmorrhage should be made, or at least not before the appearance of cramps or manifestations of anæmia and general collapse. The occurrence of considerable hæmorrhages from the kidneys and other important organs should alone demand the use of checking remedies. The treatment in general should be purely expectant, reducing, not stimulating.

Keratosis Pigmentosa. — Neumann¹ proposes this as a more appropriate title for that condition of the skin in old people called *verruca senilis*, in which the horny layer becomes dry and brittle, and the epidermal cells accumulate in numerous layers, sometimes upon a smooth base, sometimes upon the remains of papillæ, in the form of wart-like protuberances, which are colored yellowish-brown or black by an abundance of pigment cells. The microscopic examination of a case recently observed by him showed senile atrophy of the cutis, and accumulation of pigment in granular form about the vessels. The sebaceous glands were enlarged, their mouths stopped or obliterated, so that they were elevated above the surface of the skin in the form of wart-like, pale red tumors, like *verruca filiformis*. They are distinguished from ordinary warts, however, by their consisting almost wholly of epidermal elements, the papillæ not being implicated. They may be made to disappear by frequent rubbings with *sapo viridis*, with the application of iodglycerin, or weak solutions of carbolic acid. The process may be shortened, however, by scooping them out with the sharp spoon.

Elephantiasis Arabum. — Dr. D. W. Osgood² of the Foochow Medical Missionary Hospital, contributes an interesting article on the treatment of this affection, together with a table of fifty cases of *E. scroti* which were operated on successfully in Southern China. In about three fourths of the cases at Foochow the disease affects the lower legs, in the remaining fourth the scrotum. The treatment of the former consists in carefully bandaging the limb from the toes to the groin, and confining the patient to a horizontal position. Blisters are applied over the enlarged glands in the femoral space. This is continued until the leg regains its normal size, after which the patient wears an elastic stocking. When the disease is recent, marked improvement, if not a complete cure, may be hoped for. The operation for the removal of the scrotum, when affected by the disease, consists in (1) the elevation of the tumor for an hour or more before operating; (2) the use of Fayrer's tourniquet; (3) dissecting up lateral flaps, which should not include any of the diseased skin; (4) dissecting out the penis and testicles; (5) holding the genitals well out of the way, and removing the scrotum with a few strokes of the scalpel; (6) arresting the hæm-

¹ Vierteljahresschrift für Dermatologie und Syphilis (from Wiener medizinische Presse), 1875, page 548.

² New York Medical Record, Vol. II., No. 15.

orrhage by pressing upon the wound and by ligating or twisting the arteries. About one half the patients have hydrocele; in this case the sac is opened with a free incision. Some of these growths, consisting mainly of hypertrophy of the connective tissue of the corium, are enormous, and yet of sixty cases operated on in China, within the last fifteen years, all, according to Dr. Osgood, have recovered.

Idiopathic Atrophy of the Skin. — Dr. R. W. Taylor¹ communicates an interesting case of this rare affection in a woman forty-five years old. It consisted of groups of round and oval patches of skin of various sizes, from the diameter of two lines to that of half an inch, situated on the arms, abdomen, and thighs. Their surfaces were very smooth and had a white glossy appearance, resembling very much mother-of-pearl. They were sharply defined and very slightly depressed below the general level. The subcutaneous tissue was thinned, and there were no hairs upon them, not even downy ones. On the abdomen a group of these patches, about a dozen in all, presented a marked contrast to the atrophic lines of pregnancy, with which they were interspersed. They were somewhat anæsthetic, which the patient illustrated by sticking a pin into them, and she also stated that she sometimes experienced a sensation of numbness in them. In addition to the white patches there were others somewhat smaller, of a light brown color. The surface of the latter was rough, and they closely resembled tinea versicolor. The brown epithelial scales could be easily scraped off from the older and larger ones, leaving patches identical with those above described. It was evident that the brown spots were the earlier manifestations of the disease, being somewhat hyperæsthetic at first, and after increasing slowly in size, for some six months, by impreceptible desquamation they changed into the white atrophied patches. This was the whole process, and no subsequent changes in the affected parts were observed. The disease had existed two years. Dr. Taylor expresses the suspicion that it is a tissue degeneration due to some obscure faulty innervation.

HAMMOND ON THE DISEASES OF THE NERVOUS SYSTEM.²

THE wide-spread reputation of Professor Hammond, his experience, well known to be extensive, and the fact that his book has run through five editions in as many years, and is familiar to the public, relieve us from the obligation of pointing out the merits of the present volume at length. It might, indeed, be taken for granted that it would contain much that is valuable and

¹ Archives of Dermatology, January, 1876.

² *A Treatise on the Diseases of the Nervous System.* By WILLIAM A. HAMMOND, M. D., Professor of the Diseases of the Mind and Nervous System in the Medical Department of the University of the City of New York, etc., etc. Sixth edition, rewritten, enlarged, and improved. New York: D. Appleton & Co. 1876.

interesting, and what really surprises us in looking it over is not its excellencies but its deficiencies.

We regret to say that we do not find in it the qualities which alone could tend to advance the science of the subjects with which it deals, a critical, unprejudiced examination of evidence, but, on the contrary, that we constantly meet with loose or insufficient and misleading, yet at the same time dogmatic statements, which are well calculated to delight the sanguine, but will justly be regarded with distrust by those who are acquainted with the conflicting arguments of other observers. This is especially noticeable in the chapters upon congestion and anæmia of the brain and spinal cord, subjects which call for peculiarly nice treatment on account of the insufficiency of our present knowledge with regard to them.

In connection with the differential diagnosis between the two former of these affections, the value of ophthalmoscopic evidence at all stages of the disease is repeatedly spoken of, without a word of reference to the fact that excellent ophthalmologists have declared that such evidence is useful only within the narrowest limits.¹

Manz says, "I have examined a considerable number of anæmic and chlorotic persons, and cannot say that I could have diagnosticated this pathological condition with certainty with the ophthalmoscope."

Upon examining all the insane patients (127) at the Charité in Berlin, Schmidt found but thirteen in whose eyes anything abnormal could be detected, and with regard to some of those cases he was in doubt. He says further, "I agree, moreover, with Manz in saying that the general affections of the blood and circulation have no direct influence upon the vascular system of the eye. I have examined the eyes of persons who lay in high fever, without being able to discover any change in the circulation of the papilla."

Professor Hammond has a perfect right to his own opinion in the matter, of course, but his readers have also a right to expect that both sides of such important questions should be presented to them.

The difficulties which attend the formation of just scientific notions respecting hyperæmia and anæmia of the spinal cord have recently been well shown by Leyden in his valuable work.² After speaking of the impropriety of using the term "spinal-irritation" to designate the pathological substratum of a well-known group of symptoms, he says, "At the same time it cannot be supposed that anything is to be gained by the substitution, for these and other weak arguments in favor of this doctrine, of theories which suppose the existence of anatomical changes so uncertain in character as hyperæmia, whereby gate and house door are thrown open to every arbitrary hypothesis. The arbitrariness which pervades the entire doctrine of hyperæmia and anæmia of the spinal cord is displayed especially clearly in the work of Hammond, *Diseases of the Nervous System*, Philadelphia, 1872.

"The author recognizes not only anæmia and hyperæmia of the spinal cord, not only active and passive hyperæmia, but even anæmia of the posterior and of the anterior columns; spinal irritation he characterizes as anæmia of the

¹ See, for instance, statements by Manz and Schmidt, *Monatsblätter für Augenheilkunde*, 1874, page 447 et seq.

² *Klinik des Rückenmarkskrankheiten*, 1875.

posterior columns, and in truth he has just as much and just as little right to his opinion as Ollivier and Andral to theirs, when they regard the same disease as due to congestion of the cord."

Professor Hammond refers to the opinions of Leyden, but says, "His remarks are evidently based rather on theory than practice, for it is very apparent he has seen little or nothing of the disorder under consideration." The counter-criticism would be a fair one if much as to the probable pathology of the disease were to be gathered from "seeing" it, but Hammond himself says, "In thus specifically locating the lesions in these affections, I am aware of the fact that post-mortem examinations are wanting to confirm them." The clinical evidence, on the contrary, has long been before the profession, and on the question of interpreting it we prefer to rank ourselves with those who think that expressions of opinion add nothing to the value of scientific evidence, rather than with those who hold the contrary view. We do not see that Professor Hammond brings forward any new argument of importance in support of his view of the pathology of the so-called "spinal-irritation." It has long been agreed that the patients suffering thereunder are frequently in a generally anæmic condition, and that the symptoms, which affect largely the sensitive sphere, are relieved by tonic treatment, and any one might, if he liked, hazard the guess that the spinal cord was insufficiently supplied with blood, like the other tissues.

That such patients should be more comfortable when lying down than when standing is readily conceivable on other grounds than because in the former position more blood gravitates to the spine. As regards the evidence to be drawn from the action of ergot, all writers do not agree that it is proved to cause contraction of the vessels of the spinal cord;¹ and even supposing this to be the case, it is hardly fair to conclude from the fact that contraction of blood-vessels causes more signs of irritation in a morbidly irritable, than in a healthy cord, that the morbid condition of the former consisted essentially in anæmia.

Our criticism, however, is not that Hammond, like Erichsen and others, adopts the theory of anæmia of the posterior spinal columns provisionally and as the most probable theory, or even as affording the best basis for treatment which at present exists, but that, in examining into its claims as a scientific doctrine, he appears led by prejudice to give undue prominence to the arguments in its favor, and too ready to draw conclusions from insufficient evidence.

As we began by saying, we have not, for obvious reasons, thought it necessary to occupy space in these columns to praise a work whose merits will be assumed by all in advance. It is in general both interesting and instructive, and gives proof of wide reading and large experience, and there is no single book in English which gives such a good general idea of the modern pathology of the nervous system; but we sincerely regret that we do not find it pervaded by a more strictly scientific method, to wit, by a greater readiness to present both sides of disputed questions, and to make confessions of ignorance where ignorance exists.

¹ See Vulpian, *L'Appareil Vaso-Moteur*, and Jaccoud, *Pathologie Interne*.

MAUNDER ON ARTERIES.¹

THIS little book consists of three lectures; the first is on aneurisms, the second on wounds, hæmorrhages, and the antiseptic ligature, and the third is on the ligature of a main artery to arrest acute traumatic inflammation. The first lecture does not pretend to be an exhaustive or even an extended treatise on aneurism. At the beginning of the book is a table of Mr. Maunder's twenty-seven cases of ligature of arteries for aneurisms, wounds, hæmorrhages, and traumatic inflammation. In this table each artery is counted as a "case," as, for instance, Cases I. and II. are ligatures of the common carotid and sub-clavian performed on a patient with aortic aneurism; Cases XXI. and XXII. are ligatures of the anterior and posterior tibial, performed for suppuration and hæmorrhage from the foot, so that twenty-five persons were the subjects of twenty-seven operations, and of these eleven died. The author speaks favorably of digital compression in the treatment of aneurism, and finds that by suspending a weight of ten or twelve pounds so that the end will impinge on the compressing finger the frequent changing of assistants is obviated, and each person can maintain pressure for thirty minutes. The author gives several theories to explain the establishment of the collateral circulation, and states that although the propelling power of the heart is probably of the first importance, yet some other power must end in carrying the blood to the extremity of a limb after ligature of an artery. This power or influence comes from local nerve centres, or from the cutting off of the vaso-motor supply by the ligature, and thus, the cerebro-spinal nerve fibrils being no longer opposed by vaso-motor nerves, the blood-vessels dilate. The operations for the ligature of particular arteries are well described, and in many cases made plain by excellent diagrams. We are surprised that the case of successful ligature of the innominate by Smyth at New Orleans, in 1864, should not have been alluded to.

In the second lecture the author's experience in tying vessels which were wounded or which had sloughed is given, and nothing new or original is mentioned, except that a case of bleeding after the removal of a tonsil was successfully treated by keeping the patient's mouth wide open with a wine-cork inserted between the teeth. The tonsil had been cut off on Wednesday, and the hæmorrhage continued through Wednesday night and all day Thursday, although ice, solution of perchloride of iron, matico, and gallic acid had been very freely used. On inserting the cork the hæmorrhage ceased, and never returned. Mr. Maunder saw the case in consultation after the cork had been put in the mouth; he advised that it should be kept in for a few days, on the theory that the angle of the jaw exercised some compression on the main artery, and so prevented the dislodgment of coagulum from the bleeding vessel; the surgeon who put the cork in, however, wished to expose the bleeding surface to the atmospheric air. Whichever influence was the more powerful, the result was very satisfactory. In the last half of the lecture many cases of ligature

¹ *Surgery of the Arteries.* Lettsomian Lectures of the Medical Society of London, 1875. By C. F. MAUNDER, Surgeon to the London Hospital, formerly Demonstrator of Anatomy in Guy's Hospital. London: J. and A. Churchill. 1875.

with antiseptic catgut are mentioned, and the conclusion reached is "that the fate or behavior of a given antiseptic catgut ligature applied to the continuity of an artery cannot be foretold."

In the third lecture five cases of acute suppuration treated by ligature of the main artery of the limb are described; of these, two recovered, two died of pyæmia, and one of exhaustion. This practice originated, we believe, with Dr. Campbell, of New Orleans, many years ago, but Mr. Maunder did not know of Dr. Campbell's practice when he first advocated the proceeding. The following are some of the facts and conclusions enumerated at the end of the lecture: "That ligature of the superficial femoral artery has arrested acute inflammation consequent on wound of the knee-joint; that ligature of a main artery will diminish profuse suppuration; that gangrene and secondary hæmorrhage, as the result of ligature, should not be anticipated in the healthy subject."

THE WEST RIDING LUNATIC ASYLUM REPORTS.¹

THE fifth of this now well-known series of reports is at hand, and fairly sustains the reputation of its predecessors. Of the fifteen papers seven are by officers of the hospital, which, with its fourteen hundred patients, affords ample material for research of a varied and extensive kind. When the medical staff of an insane hospital find time to conduct experiments of an elaborate and prolonged character, and to make careful and valuable annual reports of them, they deserve much credit. But few of our hospitals are sufficiently well-officered to admit of it. It is watch and watch with them, day and night and Sundays. It is literally true that a half-hour of uninterrupted time is very rarely at their disposal. This must be true of most foreign hospitals also. At any rate these reports are unique, so far as we know; and though nearly all insane literature of any value has come from the physicians or ex-officials of insane hospitals, it is either buried in annual reports or special journals, which do not reach the profession generally.

Several of the more important papers in the present volume are by former officers of the asylum, that of Dr. Ferrier, on Labyrinthine Vertigo, or Menière's Disease, being of special interest. Vertigo is one of the most frequent symptoms of mental and nervous diseases, though not always well defined in its character. It often gives the patient much solicitude, and sometimes of itself induces a state of melancholia, with suicidal impulse. To locate and explain satisfactorily so distressing a symptom is a great relief to a person who fancies he has cerebral disease of a dangerous nature. Every physician should therefore learn to analyze all cases of vertigo as far as possible, and should keep in mind the exquisite apparatus by which perfect equilibration is brought about.

The sensory impressions on which equilibration depends are tactile, visual, and labyrinthine. It is disorder of the latter which causes the most serious subjective illusions and sensations. The three semicircular canals of each ear, with their contained fluid and delicate nerve expansions, are not concerned in

¹ *The West Riding Lunatic Asylum Reports.* Volume V. London. 1875.

conveying auditory impressions at all. By their different positions they correspond to the possible axes of rotation of the body, and have their ampullæ at opposite ends, so that any change of position produces a change of level in the contained lymph, and a pressure on nerve extremities which report to the coördinating centre the exact position of the body. Disease, irritative or destructive, of any canal produces corresponding sensations of rotation, either horizontal or perpendicular, backwards, forwards, or to one side or the other, as the case may be. A knowledge of this mechanism, and of the exact nature of the disease, will often relieve a patient's mind in a remarkable degree, and enable him to gradually overcome the vertigo due to partial affections of the labyrinth.

The close relations between the nuclei of the auditory and vagus nerves in the medulla account for the frequent association of visceral disturbance and vertigo. This is seen in headache with giddiness and nausea, in dizziness with palpitation, and in seasickness.

Dr. J. Crichton Brown, medical director of the asylum, contributes a paper on the functions of the thalami optici, and from a number of clinical observations concludes that these bodies are sensory ganglia, having the same relation to the nerves of common sensation as the olfactory, optic, and auditory ganglia have to their respective nerves.

Dr. J. Hughlings Jackson writes on Temporary Mental Disorders after Epileptic Paroxysms. Under the clear light of Dr. Jackson's analysis, epilepsy is emerging from its former obscurity to take rank with general paralysis as a well-defined and intelligible disease. In this paper he applies his theory of a discharging lesion affecting first the most specialized and complex centres, to the region of conscious mental action. He supposes a discharge in every case, however slight, to have occurred. The condition afterwards is duplex: there is (1) loss or defect of consciousness, and (2) mental automatism, that is, the discharge induces partial loss of control, permitting automatic action.

The conduct in this state should be judged not by its violence, nor by its social importance, but by its degree of complexity. The slighter the discharge, the more complex will be the actions. As is well known, an unobserved attack of *petit mal* may be followed by hours or days of mental automatism of the most elaborate character. As in somnambulism, the ideas most recent and uppermost may be carried into action, with much apparent coherence, the patient meanwhile remaining semi-conscious or totally oblivious; and to the medical observer it makes no difference whether the patient cuts the wood for breakfast or splits his wife's head open with the ax. The last is an act of no greater complexity than the first, and either may be performed in the epileptic dream.

This epileptic somnambulism may occur in cases where epilepsy never has been suspected. The acts may be elaborate, and of great social consequence; the patient may partially remember them, and by subsequently hearing or reading of them may come to think he clearly remembers. The elaborate attempts at suicide made by some melancholiacs in a state of mental bewilderment, which if unsuccessful are partly forgotten, result from a similar state of

automatism, induced perhaps not by a discharging lesion, but by gradual exhaustion, of the highest centres, including consciousness. The exhaustion of excessive masturbation, of abuse of alcohol, of fevers, etc., produces a like condition. The complexity, unusualness, atrocity, or absurdity of an act is often the only clew to its automatic nature.

This question is of such importance and interest that it demands the careful study of every conscientious physician, much that is called crime being of an obscurely automatic character. We have not space to even mention all the other excellent articles in the volume before us, but shall reserve some of them for future use. A paper on Cerebral Hyperæmia, by Dr. Fothergill; On the Appearance of the Retina and Choroid during the Administration of Certain Drugs, by John Hunter Arbuckle, M. D.; On the Morbid Histology of the Brain in the Lower Animals, by Herbert C. Major, M. D.; and one on Epileptiform Seizures in General Paralysis, by Dr. Newcombe, are especially valuable.

T. W. F.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

EDWARD WIGGLESWORTH, JR., M. D., SECRETARY.

APRIL 3, 1876. *Stricture of the Urethra.* — On this subject DR. BUSH read a paper, which he reserved for publication.

DR. J. G. BLAKE related a case where Dr. Hodges had, fifteen years ago, divided a stricture externally. This patient had been kept in view ever since, and had always been in good health, passing the catheter himself. The stream of urine was about as large as a French No. 8 catheter.

DR. T. B. CURTIS mentioned three cases of complete retention: the first from cold, the second from excess, the third from using too large a catheter. One of his patients uses at present a No. 20 catheter, French, but if he tries to pass catheter No. 21 he has retention.

DR. FIFIELD said, "It seems to me that in considering the subject of stricture we fix our attention too steadily on the instrumental diagnosis and treatment of the various affections of the male urethra to which we apply, and too often believe we apply correctly, the term stricture. Long ago John Hunter said, speaking of ulcers, 'Do not dress the sore too curiously.' I think we might say at the present time, 'Do not examine the urethra too curiously.' We are apt to speak of stricture as though it was the easiest thing in the world to diagnosticate. Yet each year shows more and more clearly to me that it is one of the most difficult, and demands the mind and hand of a master. For there is demanded, firstly, a sound knowledge of the anatomy and physiology of the urethral canal, the muscles and glands connected therewith, its contractions and widenings, the way and manner in which it is affected by nervous derangements, and by sympathy with distant organic or functional disturbances; secondly, a discriminating, wise judgment, well mixed with conscientiousness, to decide at what time, under what circumstances, and in what manner, the use of instruments is demanded. It would seem at the present

time that we are in great danger of being led into attempts to decide what is stricture and what is not by the use of bougies à boules of greater or lesser size. Against this I have always raised my voice. If any one wishes to read of strictures which were not strictures, and yet were treated as such, let him read Sir Charles Bell's *Institutes of Surgery*, and ponder the case therein related of the gentleman diligently treated two years for stricture, who passed a large fish-hook from his rectum with entire relief from his supposed stricture. Or if he thinks the diagnosis of stricture is easy, let him read Civiale's treatise on *Nervous Affections of the Neck of the Bladder*. We hear a great deal of contracted and misplaced meatus, and of the reflex troubles caused thereby, but I fancy that there are a vast many cases of contracted or misplaced meatus which bring no trouble to their owners. To establish the curability or non-curability, the fatality or non-fatality of stricture, questions which have been discussed to-night, we must first have reliable statistics from which all possible errors of diagnosis have been excluded.

"In regard to treatment. We read, and hear read trippingly, cases where the narrator says he or I introduced a pilot-bougie, followed it with a Holt's divulsor, and split the stricture. The patient fully recovered. Did he? I have never met with a tighter stricture than I found in one of these cases a year after its announcement as a success. Should not some of these cases, instead of reading 'he went out cured,' read 'he escaped with his life'? Last summer I saw in the wards of M. Gosselin, at Paris, a stricture split with a Holt's divulsor. I saw the parts removed at the autopsy which followed some days after, and the abscesses which had burrowed beneath the pelvic fascia were both large and numerous. Should we not say to these operators, as we might say to a man who had carried an unprotected lighted candle through a powder-magazine repeatedly without accident, 'Sir, you are very lucky.' It struck me that one of the cases read to-night, and which testifies so strongly to the care, skill, and good fortune of the reader, might have been as successfully treated by the method of gentle dilatation which our chairman [Dr. T. B. Curtis] has set forth in such a masterly manner in the work which gained the *prix Civiale*."

DR. BUSH referred to cases recorded by Drs. Van Buren and Otis, where division of the meatus was followed by disappearance of the symptoms of stricture.

In answer to the remarks of Dr. Fifield, DR. CURTIS replied that we have the views of Dr. T. N. Otis, of New York, who asserts that *gleet* is always symptomatic of stricture requiring surgical treatment, and that by complete internal urethrotomy alone can a radical cure of stricture be obtained. With the exception of Dr. Otis, all the authorities on this subject concur in the opinion that stricture is *radically incurable*, and that in all cases, however treated, an after-treatment, consisting in the occasional introduction of bougies, must be used, with a view to preventing the re-contraction of the stricture. As an example of the practice to which the adoption of these new principles leads, a case of Dr. Otis's may be mentioned, in which four distinct operations of internal urethrotomy were performed in a urethra which admitted a number 30 sound, and through which Voilemier's largest shaft, number 32 in calibre, had

repeatedly been driven. In another case of Dr. Otis's, where fourteen distinct strictures were diagnosed and incised, the surgical procedures were followed by several attacks of urethral fever, and by an urethral hæmorrhage by which eight or ten ounces of blood were lost. The propositions upon which this practice is based, namely, that gleet always depends upon stricture, and that stricture can be cured without tendency to recurrence by complete division, are as yet but *assertions*, in regard to which the burden of proof rests with Dr. Otis.

DR. C. F. FOLSOM made remarks showing that the percentage of suicides and fatal accidents is very much greater in American than in English asylums for the insane.

DR. WIGGLESWORTH presented for signatures a petition to Congress in favor of the establishment of the metric system of weights and measures.

DR. J. G. BLAKE spoke of cases of acute rheumatism occurring at the City Hospital, and treated with great success by salicylic acid.

DRUNKENNESS AS A FORM OF ANÆSTHESIA.

A VERY Daniel has come to judgment in the matter of anæsthesia. It is no less a person than Professor John Lynk, of Terre Haute, Indiana, who publishes his views in the May number of the *Cincinnati Lancet and Observer*. He has discovered that the true anæsthetic is alcohol taken internally. He has found that it is very useful in certain forms of disease, but he believes that its greatest triumph is to come. "And to-day," he writes, "I will predict that it will rank *first* as an anæsthetic, by the close of the next decade." It would be unjust not to give the following in the author's own words: —

"I have long been using it in this capacity, and am gradually learning to appreciate it more and more, until I have come to depend upon it almost entirely in my surgical operations, and shall be able to demonstrate its effects fully, I have no doubt, in my next capital operation. I have recently amputated a finger with entire unconsciousness on the part of my patient, where no other anæsthetic was used. In less than two years past I saw its effects on a young lady, taken for the extraction of teeth, carried to such an extent that four were removed without the movement of a muscle, the eyes remaining fixed all the while. The condition was such that all the limbs might have been amputated without consciousness on the part of the patient. One can but wonder with amazement and horror at the thought that, a few years since, patients were mutilated and tortured with the knife, many times lashed to the table, while the operator proceeded amidst the moans and writhings of the unfortunate, bemoaning the deficiency of chemistry, in not furnishing an anæsthetic that would place his patient in a condition beyond that of consciousness, and when that most deadly of compounds, chloroform, that which has carried off scores suddenly and unwarned, was introduced, but a few years since, the whole civilized world cried out for joy, '*Eureka*.' But stop and stand amazed when I proclaim that since the days of '*Noah*' there has existed a sure and comparatively safe remedy, in the hands or within the reach of every

household, that was daily producing the very effects, within the observation of all, so much desired. Yes, science and reason remained blindfold to its practical application; and while the surgeon stood over his patient, writhing with agony under the knife, there was within an easy stone's-throw, no doubt, and in many instances within the very range of vision, those in a condition whom the knife could have made no impression upon, and for whom no one felt the least anxiety as to their chances for recovery."

The learned professor does not appear to have heard of ether, but, as its days are numbered by his new discovery, the fact is of little consequence. Several cases are given, one of the most interesting of which is that of Mrs. B., aged twenty-two years, and weighing about eighty-five pounds, who had a small tumor on her side, for the removal of which she was made quite drunk, as the following account shows:—

"I advised the removal of the tumor and appointed Sabbath¹ morning, May 16th, at ten A. M., as the time; and directed that two ounces of brandy be taken at 8, 8½, 9, and 9½ o'clock. We arrived at ten o'clock and found patient sleeping, and quite unconscious. Pulse slow and full; temperature 97 in axilla."

The operation lasted about fifteen minutes. The writer continues, —

"The patient moaned and talked unintelligibly. She vomited once during the operation, as she had done once or twice before our arrival. The wound was closed and restoratives ordered. I called the next day and found her sitting up, feeling quite well."

The question which troubles us most is what reward can be conferred on Professor Lyuk for his discovery. The American Medical Association will probably do nothing, for its president, Dr. Sims, will hold that Noah was the true discoverer, — although he did not introduce alcohol into surgery, any more than Horace Wells did ether, — and will probably subscribe for a monument to the patriarch. Congress has a fit of economy, so that nothing is to be hoped from that quarter, and thus the discoverer is not only left unrewarded, but absolutely defenseless against the Temperance Alliance, which, according to report, has set a price on his head.

MEDICAL NOTES.

— The execution of Frost at Worcester on May 26th is interesting as a commentary on Dr. Haughton's formula for the length of the drop. We have no account from a medical observer, but according to the papers the head was nearly pulled off. Certainly vessels of the neck were severed, and the bleeding appears to have been profuse. This is a very rare occurrence, and is the more remarkable that the criminal weighed only one hundred and twenty pounds and fell only seven and one half feet. According to Dr. Haughton's theory he should have fallen over eighteen feet, which in his case would certainly have occasioned decapitation. The cause is probably to be sought in the rope, which must, we think, have been small and non-elastic.

¹ "There's naught, no doubt, so much the spirit calms
As rum and true religion." — BYRON.

The execution of Piper was remarkably successful; according to all accounts there were no convulsive movements whatever, which gives a show of plausibility to the reporter's statement that the neck was broken. This should have been determined by an autopsy.

— A committee of the St. Louis Medical Society has made a very sensible report on ether and chloroform. It is, of course, strongly in favor of ether, though perhaps hardly so much so as we should have made it. The exception at the end of the first preamble is hardly sustained. It would have been more correct to say that under the circumstances in question chloroform is less dangerous than at other times. The report concludes as follows:—

“Whereas, the extended use of sulphuric ether and chloroform, since their introduction to the medical profession as anæsthetics in 1846, has clearly shown that ether is the safer agent, except with women in labor and young children; and

“Whereas, the St. Louis Medical Society of Missouri desires to make more general the advantages resulting from the establishment of these facts; therefore

“*Resolved*, That the St. Louis Medical Society of Missouri recommends the medical profession of the city and state to use sulphuric ether for producing anæsthesia in the operations of general surgery whenever it is practicable.

“*Resolved*, That the St. Louis Medical Society of Missouri recommends to municipal governments, boards of health, and trustees of hospitals and charitable institutions to make the regulation that sulphuric ether shall be the preferred customary anæsthetic in the institutions under their charge.

“*Resolved*, That this report be communicated to the medical journals and daily press.

[Signed.]

WILLIAM PORTER, M. D., *Recording Secretary.*”

BOSTON CITY HOSPITAL.

MEDICAL CLINIC.

[SERVICE OF DR. HALL CURTIS.]

Chronic Rheumatoid Arthritis and Dyspnœa.—J. G., laborer, thirty years of age, but looking much older, entered the hospital the 23d of February, 1876. He has had several attacks of rheumatism since youth, but none lately. One year ago he noticed a shortness of breath, which has not prevented work, however, till lately. He complains of soreness in the præcordia and under the right clavicle; also of pain and constant beating in the substernal region. There has been no pain in the left arm, no hæmoptysis, and no cough. His cheeks are flushed. His appetite is fair. The bowels are regular. Pulse 72, full and regular. The hands are very much distorted from rheumatoid arthritis. Dyspnœa marked. The area of cardiac dullness is enlarged, with strong pulsation in the epigastrium. A soft systolic souffle is heard at the apex only. There are mucous râles at base of both lungs.

R̄ Tincturæ digitalis gr. x. every four hours.

R̄ Spiritus ætheris comp. 3 i. night and morning.

Epigastrium painted with tincture of iodine.

February 26th. Since last record he has somewhat improved. The pain in the epigastrium has been relieved. He complains that his neck seems thickened and impedes his breath. The souffle has now disappeared, while an occasional sibilant râle is heard at the apex of the left lung.

March 3d. Sibilant râles are now heard through both backs. The moist râles have disappeared. The digitalis is omitted.

R̄ Potassii iodidi gr. x. three times daily.

March 10th. The heart's action is regular. The first sound at apex is prolonged. Dyspnœa is still troublesome, the^d respiration being feeble and distant throughout chest. All medicines omitted. Thinking the dyspnœa might depend on an irregular gouty condition, the following mixture was ordered to be taken every four hours:—

R̄ Vini colchici,	
Tincturæ hyoseyami	āā ℥ x.
Potassii iodidi	gr. ij.
Inf. quassia	3 i. M

March 17th. Dyspnœa less marked. Constant pain at epigastrium, apparently diaphragmatic. Apply below ensiform cartilage—

R̄ Olei tigllii	gtt. xx.
Linimenti saponis	3 i. M.

March 25th. Much improved. No pain at ensiform cartilage. Dyspnœa relieved.

April 3d. Discharged, well.

Persistent Headache from Cardiac Debility.—A. R., thirty-nine years of age, married, washerwoman, entered the hospital March 18th. Her father and two brothers died of phthisis. Her catamenia appeared at seventeen, and were always regular till they ceased, four months ago. She has had five children, and one miscarriage. The last labor very lingering.

Her general health has been good till four years ago, when she suddenly became troubled with dyspnœa and palpitation, which continue to present time with every slight excitement. There is no history of well-marked rheumatism. In her last pregnancy, eighteen months since, she was much troubled with cardiac pain and coldness of the extremities.

During the past fortnight she has had a troublesome cough, with scanty expectoration and sudden sweats. Since the cessation of menstruation she has had constant attacks of headache and dizziness. The lungs are normal. The heart sounds are distant, and impulse feeble. No murmur. Temperature 99.2°; pulse 80; respiration 32.

R̄ Tincturæ digitalis gtt. v. every four hours.

R̄ Tincturæ ferri muriatis gtt. x. every four hours.

March 22d. Headache very severe.

R̄ Potassii bromidi gr. xxx. at night.

R̄ Pulv. guaranæ gr. xxx. to be given at once.

March 23d. No relief. Omit medicines. Apply hot-water bags to nape of neck. Mustard foot-bath, and inhale the vapor from the bath.

R̄ Chloral hydrate gr. xx.

March 24th. Headache much relieved.

March 28th. Headache persistent.

R̄ Potassii bromidi gr. xx. every four hours.

R̄ Emplast. cantharadin 1 × 3 to neck.

April 1st. No change. Omit present treatment.

R̄ Ferri et quiniæ citratis	gr. xl.
Etheris,	
Tinct. digitalis	āā 3iv.
Aquæ	3 xv. M.

Four drachms every four hours.

April 5th. Condition has much improved. Headache has disappeared. She feels stronger.

April 6th. Discharged, well.

Delirium Tremens. — J. McC., a sailor, thirty years old, was brought by the police to the hospital April 16th, in the evening. He is a powerfully-built man, in a state of active delirium. He has been drinking hard for three days, and for forty-eight hours has had but little food or sleep. He was placed in a strait-jacket. He refused all nourishment.

April 17th. Noisy delirium all night, without sleep. This still continues. He cannot be induced to take food, or even to drink. Temperature 101°; pulse 128. Half a grain of morphine was injected subcutaneously, and quarter-grain injections ordered to be repeated every four hours till he slept. Enemata of beef-tea every three hours. P. M. Temperature 101.4°; pulse 132.

April 18th. Morphine in quarter-grain doses was injected subcutaneously yesterday every four hours. The last injection was made at 10.30 P. M. He was then very noisy, but soon fell asleep and slept five hours. He had taken in all one and a quarter grains of morphine in twelve hours. The enemata of beef-tea were retained. A. M. Temperature 102.8; pulse 108. He awoke this morning very delirious. Morphine in a quarter-grain dose injected at 7.15. At 10.45 he was still very delirious and noisy. Half a grain of morphine was injected subcutaneously. He still refuses nourishment. Continue morphine, one quarter of a grain every four hours, and enemata of beef-tea, with forty grains of bromide of potassium three times daily. P. M. Temperature 104.2°; pulse 140.

April 19th. Constant delirium. Temperature 104°; pulse 96. Continue treatment.

April 21st. Since last record he has become more tranquil, and has slept comparatively well. Still refuses all nourishment. Morphine was omitted yesterday morning. Enemata, with bromide of potassium, continued.

April 23d. Since last record has improved. Is rational, and takes liquid food. Strait-jacket discontinued yesterday.

April 24th. Much more comfortable. Slept well last night. Takes food freely this morning. May have his clothes, and get up.

April 26th. Discharged, well.

HALL CURTIS, M. D.

LETTER FROM WASHINGTON.

MESSRS. EDITORS, — We find that the report of Columbia Hospital, which we stated to have been *published* by the Interior Department, was, after the printing, not published, but suppressed, and this accounts for its incompleteness and abrupt termination, as alluded to in our last letter.

The investigating fever still runs high, and now the management of the Government Hospital for the Insane is receiving its full share. The superintendent of that institution, Dr. C. H. Nichols, would seem to have had more than his allowance of the annoyances to which officers in charge of insane asylums are peculiarly liable; its past history, to which it is not necessary now more than to allude, would show that, being a government appointment, it is open to the intrigues for place of politicians who, as such, do no credit to the profession of medicine. It would seem as if this investigation were conducted with the view of developing fraud, cruelty to patients, and general mismanagement. A misfortune connected with this is that the prosecuting testimony, so to speak, has been made public, and scattered broadcast by the daily press before any rebutting testimony had been taken; severe and condemnatory prejudgment has been the consequence. To believe some of the daily papers, Dr. Nichols is a fiend in human form; this, of course, in the weakness of the human mind, makes it all the harder for the defense to establish a favorable impression. To those of the profession here who know Dr. Nichols and the working of his institution, or indeed the working of such institutions generally, it was hardly necessary for him to take the trouble to produce such an array of witnesses in his favor, as they were convinced of the falsity of the charges and understood the causes for the character of the testimony against him, as coming from discharged employees, and nervous, biassed, and hasty-judging visitors and friends of patients. The testimony for the defense is now being received, and will probably engage the attention of the committee for some time longer. It has already produced a revulsion of feeling in favor of Dr. Nichols. It would seem unfortunate that this question should be agitated now, just as Dr. Bucknill is publishing in *The Lancet* his strictures upon the American restraint system, but this does not seem as yet to have been brought to the notice of the prosecution.

There was one charge which, until it was satisfactorily explained, as it has been by a circular printed, it is presumed, under the direction of the Department of the Interior, was thought to be very damaging to the character of the institution. It seems that there were a number of patients confined within the hospital, which was at the time in a crowded state, that by being non-residents of the District of Columbia were not entitled to the benefits of the institution, and that their condition was such as to allow of their being returned to their friends to be cared for in the proper way. Upon making this statement to the proper authorities, Dr. Nichols was notified by the district commissioners to turn them over to the police for the purpose of effecting this transfer. This was done, but in its execution by the police three of the patients were left at night, in their own neighborhood to be sure, but away from

home and their friends. The papers took this matter up and charged the doctor with turning lunatics adrift to care for themselves, in the most cruel manner. Major A. C. Richards, the police superintendent, assumes for his force all the responsibility as to the mode of disposing of these patients; they were transported at night to avoid the excessive heat of the season, and his way of describing the incident is "that unfortunately they" (the three patients) "became separated from their escorts while on their way to their homes." Whatever opinion we may form upon the matter itself, we see Dr. Nichols relieved entirely from any responsibility or complicity.

With regard to the management of the institution itself, much stress has been laid upon the fact that Dr. Nichols has left so much, or indeed anything, to the control of his assistant physicians, many looking upon them in the same light as they would the resident staff of a general hospital, where young graduates enter for a year or two to complete their medical studies, and not knowing of the years spent by these assistants in passing from one grade to another as a line of promotion, until they themselves are selected for superintendents. As well say that the colonel of a regiment should do the duties of his captains. Indeed, an acute lawyer here, prominent in charitable objects, expressed it as his opinion that the superintendent should only serve for ten years, then to be replaced by another and a political appointee. This is only one of numerous examples showing the want of knowledge of the requirements of a superintendent. As to its internal appointments, your correspondent feels at liberty to speak somewhat positively, judging from the impression made some fourteen years ago during a six months' residence in a subordinate and medical capacity. First, as to supposed cruelty by personal violence; this may be dismissed in acknowledging for this, in common with other American asylums, the necessity for restraint in violent cases, which has been made an open question by Dr. Bucknill, and with the statement that although at that time there were attendants on duty, — one of whom, at least, has since made himself notorious for brutality while under the influence of liquor, having been hung for murder, — yet such was the discipline that no well-grounded complaints were noted. It is very easy for patients to prejudice their friends as to violence in cases where the stomach-pump or enema-syringe has to be used. It was the rule at that time in all cases that a sufficient number of attendants should be employed to morally influence the patient by preventing any *show* of resistance. The discipline of the institution was such that the first offense was the last; dismissal followed, without a saving clause, and this may be found to be the mainspring of much of the testimony.

As to cleanliness, some have thought that such comforts as cushioned seats, carpeting, etc., were too little considered for the sake of that virtue. At the time referred to the hospital was receiving constant accessions to the number of patients, from the various military camps, of soldiers covered with vermin, and the attempts were constant and incessant to rid these men of these their bosom friends, and to keep the hospital free from such pests. It seemed like an interminable warfare. It can be very readily understood, upon reflection, why complaints should arise from friends respecting clothing; to those who know the dirty habits, propensity for destroying, and desire to relieve them-

selves of all clothing, which so many insane patients exhibit in such cases, why give them other than clean and strong clothes. They are not in a state to appreciate the fit or appearance thereof, and when their friends ask to see them, they can be suitably dressed for the occasion. Yet here is a chance which is often taken advantage of by friends to make serious complaint, and the patients sometimes have just sense enough to make them cognizant of the fact. As to the diet, this investigation would show that tainted meat occasionally found its way into the hospital; undoubtedly there must always be this liability, but to presume that it was intentional, or not corrected as soon as discovered, is not warranted. The general diet was good and sufficient; more than that, it was at times very acceptable, speaking as one who has lived in a ward and taken his meals with the patients. Variety was sufficiently considered for health, but not for one who was at all fond of the table. And here a criticism might be made that while the hospital answers admirably its purpose in most particulars, it is by no means an inviting institution. There is an air of melancholy oppression about it which it is hard to shake off, and makes one hesitate in confiding to its care a case, such as of melancholia, particularly where used to the comforts and luxuries of life. There is nothing in the shape of pictures or carpeting, at least in the male wards, to relieve the eye; everything is simple and severe, looking cold and forbidding in the gloomy seasons. There are none of those little trifles, trifles to some but of importance to others, the absence of which tends to keep up a morbid irritability in the mind, such as cushioned seats, napkins for the table, and so on. I allude, of course, to those patients who can afford to be provided with them. That is to say, there is nothing of home-like cheerfulness.

One thing has been developed which is an old story but cannot be too often repeated, that is, the mode in which boards of visitors perform their office, which holds good for many another institution. Visiting day comes, fixed by common consent; everything is arranged for the occasion, clean counterpanes put upon the beds, the patients dressed in their best clothes, even the hour for the visit determined upon, and the board walks through the wards without wasting time, the refractory and disagreeable cases being put in the background. Then follows a collation, and the visit is over. Now, if an investigating committee were to decide that there should be no collations and no collusion as to day or hour for visiting, but free access to the hospital allowed the members of the board at any and all times, it would seem as if the superintendent and visitors ought both to be better pleased. Perhaps the question of lock-boxes for patients' letters will come up again before this matter is done with. We do not know the opinion of asylum physicians upon this subject at present, but should think that it would often be the means of causing investigations upon very false premises. We took the pains, during the six months alluded to, to preserve the letters written by insane patients which came under our notice, and while some of them stamp the writer at once in his dementia, others, and those, too, from decided and well-marked cases of insanity, bore every evidence of having been the production of sane and much-injured individuals.

There has been recently a very singular bill presented to Congress, which, on its first appearance, the profession were inclined to laugh at and pass unno-

ticed, but on inquiry it was found that its advocates were really pushing it with considerable show of success, and it was found necessary for the Medical Society of the District of Columbia to take proper steps to prevent its passage; accordingly, at a regular meeting of that body, a protest to Congress was drawn up, ordered to be printed, and distributed to other societies as a matter in which they also were concerned. The bill is to incorporate the National Surgical Institute of the District of Columbia, naming five self-styled M. D.'s as incorporators, none of whom are known in any way to the profession of the district. The capital stock is to be a half million of dollars, to be increased at pleasure to one million, to establish an institute for the treatment of all surgical cases, for the manufacture and sale of surgical instruments and appliances, for the establishment of a school of surgery, and for the establishment of a charity hospital for the treatment of surgical cases, the capital to be divided into shares of one hundred dollars, for the use of stockholders, and so on. In its reply, the medical society claims ample hospital accommodation at present for the treatment of surgical cases, and that there is no impediment for the incorporators in honorable competition for practice with the profession; that the bill would make the United States Congress an advertising medium, and confer such special privileges as a vested right or exclusive property in certain methods of treatment or surgical appliance; further, that the proposed school of surgery would be enabled to send forth surgeons without the full, complete, and necessary medical education, and finally makes the consideration of the provisions of this bill of importance to medical men in other sections of the country by inquiring whether this institution, purporting to be local in its character, may not eventually endeavor to extend the operation of its privileges over the entire country by virtue of the same authority. It would seem to a professional man as if the character of the bill itself would kill it in its passage, but those who know legislators best would not rest easy upon such a presumption.

The actions of Congress are particularly interesting to the profession of the district this winter, as there is a prospect of the abolition of the present board of health and the substitution therefor of an entirely different organization, much more advantageous to the profession and community, and at much less expense; but as for the details of this measure, they must necessarily be deferred to another letter.

HOMO.

WASHINGTON, D. C., May 14, 1876.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.—A regular meeting of the Society will be held on Monday evening, June 5th, at eight o'clock. Dr. Hasket Derby will read a paper on the Marriage of Near Kin, its Bearing on the Statistics of Retinitis Pigmentosa.

At the annual meeting of the Essex South District Medical Society, held at Salem on the 9th of May, the following officers were elected: *President*, E. Newhall; *Vice-President*, A. H. Johnson; *Secretary*, D. Coggin; *Treasurer*, W. Mack; *Librarian*, J. P. Fessenden; *Censors*, S. W. Torrey, O. B. Shreve, C. A. Lovejoy, C. A. Carlton, C. C. Pike; *Councilors*, J. S. Emerson, W. Mack, G. S. Osborne, J. Garland, D. Perley, A. Kemble, W. W. Eaton, D. F. Drew; *Commissioner of Trials and Councilor for Nominating Committee*, W. Mack.

D. COGGIN, *Secretary*.

BOOKS AND PAMPHLETS RECEIVED.—A Series of American Clinical Lectures. Edited by E. C. Seguin, M. D. Vol. II. No. 4.

Some Forms of Dyspepsia. By Francis Delafield, M. D. New York: G. P. Putnam's Sons. 1876.

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THE INJURIOUS EFFECTS OF THE NASAL DOUCHE AND OTHER APPLIANCES FOR FLOODING THE NASAL CAV- ITY; WITH EIGHTEEN CASES.

BY HENRY L. SHAW, M. D.,

Surgeon to the Massachusetts Charitable Eye and Ear Infirmary.

THE treatment of diseases of the nasal cavity by local remedies was brought prominently before the profession, on this side of the Atlantic, by an article of Dr. Thudicum on the Treatment of Polypus of the Nose and Ozaena by the Nasal Douche, in the *London Lancet* of 1864. This appliance, which has for its object the flooding of the nasal cavity, and also various forms of syringes and instruments since introduced for the application of liquids in the anterior and posterior nares, have now become extensively employed. Unfortunately, however, their use is not confined to cases where they are prescribed by physicians; but under various popular names they have obtained a very extensive sale, being used not only for the cure of nasal catarrh, but for all trifling or imaginary diseases of the nasal cavity. From the novelty of their application, and the apparently harmless nature of the liquids usually employed, they are often taken by members of the family as articles of toilet, or for their cleansing effect. The great extent to which they are used is perhaps not fully known to the general practitioner; but the specialist has abundant opportunities for witnessing their effect, not only in the diseased state, but in health. In the writer's experience, of the large number of patients who employ these agents, a great proportion are found to have no trouble of the nasal cavity, or only a slight irritation resulting from their use.

For many years aurists have considered the treatment of nasal catarrh with the douche as attended with serious danger, this danger being the flooding of the Eustachian tubes and passing of liquid into the tympanum, thereby causing inflammation of that organ, with all its sequelæ. As early as 1869, Dr. Roosa, in a note to his translation of Troeltsch on Diseases of the Ear, speaks of the danger of the douche, and in an article published in the *Archives of Ophthalmology and Otology*, ii. 76, he has collected, from various sources, sixteen cases, in which

results more or less serious followed its use. Dr. Pardee, in an excellent article in the *New York Medical Gazette*, vol. vi., No. 23, reports several cases in which acute aural inflammation was caused by it. Other cases have been reported, the ætiology of which cannot be doubted, all tending to show its injurious effects. The opinion long since expressed by Dr. Roosa, that the employment of the douche should be discountenanced by the profession, is now quite generally accepted by aurists.

On the other hand, some of the advocates of the nasal douche claim for it great efficacy in the treatment of diseases of the nasal cavity, and regard the evil results following its use as due to the improper manner in which it is employed. It is a question whether the beneficial effects of the douche have not been very much overrated. As a matter of cleanliness, as in cases of ozæna, both the douche and the syringe are of undoubted service. But in the large majority of cases in which these agents are employed, the same results can be obtained without any risk by the atomizer.

It is a curious coincidence in the writer's experience, that sooner or later patients with ozæna, in using the douche, are very likely to have suppurative inflammation of the tympanum. It is well known to the profession that the liquid almost invariably employed, both in the douche and in the various syringes, is tepid salted water; and of a large number of patients, seen in infirmary and private practice, who were using these appliances, but few cases can be recalled where any other liquids had been employed.

Experience has abundantly proved that the nasal cavity and adjacent parts will often tolerate the use of remedies in this way, for a very long time, without manifest injury; and this too without any great care on the part of the patient. The directions given by writers for the proper administration of the douche vary. They all have, however, the same object in view, to prevent sneezing, or any other motion by which the palate can be relaxed, and allow the liquid to trickle into the pharynx and thus produce *involuntary* swallowing. It is a question whether the force of the stream alone may not be sufficient, in some instances, to open the closed Eustachian tubes, and the liquid be passed into the tympanum. This would certainly seem to be so, since in some cases where the post-nasal syringe has been used, the use of it resulted in acute otitis media. This, however, is not the usual way in which the accident with the douche occurs: but by the escape of only a trifling quantity of liquid from the post-nasal cavity into the fauces an involuntary effort at swallowing is made, the Eustachian tubes are opened, and the liquid passes into the tympanum with an audible rush. The patient is then fully aware of what has taken place. The stereotyped remark on visiting the aurist is, "I felt the water go into my ears."

Granting that the *involuntary* act of deglutition is the cause of most of the accidents which take place from the employment of the douche, it becomes a matter of the greatest importance to know whether, by faithfully carrying out the directions of any of the various writers, one can be insured perfect safety in preventing this act. That there will be an escape of liquid from the post-nasal cavity into the fauces in a certain number of cases, even when the douche is properly employed, will be generally accepted; and it seems fair to infer that in many of these it must give rise to *involuntary* deglutition. One of the principal precautions insisted on by the advocates of the douche, in case of the escape of liquid into the throat, is that the operation should be immediately suspended. Unfortunately, in many of these cases, it is too late; the involuntary act of swallowing has already taken place, the liquid has passed through the open Eustachian tubes into the tympanum. The use of the douche, therefore, can never be unattended with danger, and one employing it is at any time liable to be the subject of serious and even fatal consequences.

Recent experiences would seem to justify the belief that the use of the nasal syringe, also, and all other appliances for flooding the nasal cavity, is attended with some risk; and that it is not even necessary for liquids to enter the tympanum, to produce harm. Instances are not infrequent where acute tubal catarrh can be traced directly to the employment, not only of the douche, but of the nasal syringe. The belief expressed by some otologists, that the douche may give rise to chronic otitis media, seems plausible; that it is sometimes pernicious in such cases, by aggravating an already existing chronic inflammation, there can be no doubt. Persons who have been but very slightly deaf for years, sometimes begin the use of the douche, for real or imaginary trouble, and in such instances it is not uncommon for them to experience a very decided increase of deafness, which can be traced to the time when the douche was first employed.

Eighteen cases of injury are presented, in sixteen of which it was from the nasal douche and syringe, in one from the forcing of liquid into the tympanum by the Valsalvian method, and in one from the snuffing of liquid into the nostrils. With one exception, they have all occurred during the last two years, and most of them within a few months. The first eleven are condensed from records in private practice, and little mention is made of treatment, as not being of interest in this connection. The last seven were treated during service at the Massachusetts Charitable Eye and Ear Infirmary. The history of these cases is not complete, and some of them could have been extended from memory, but it was thought best to present them just as recorded.

In five there was acute otitis media, with perforation of the drum-head, from the douche. In five there was acute otitis media, without

perforation of the drum-head, from the douche. In two there was subacute otitis media, without perforation of the drum-head, from the douche. In one there was increase of chronic otitis media. In one there was acute otitis media, without perforation of the drum-head, from the syringe. In one there was subacute otitis media, without perforation of the drum-head, from the syringe. In one there was acute otitis media, with perforation of the drum-head, from snuffing liquids into the nostrils. In one there was subacute otitis media in one ear, and formation of polypus in the other ear, from forcing liquids into the tympanum by the Valsalvian method.

April 26, 1876. U. L., aged forty-one. He had never had any trouble of the ears. Four months ago, by the advice of friends, he began the use of the nasal douche for catarrh. He used tepid salted water, twice daily, the reservoir being raised two feet. After using it three weeks, he noticed occasional crackling and ringing of the right ear. He then discontinued it, and began the use of the posterior nasal syringe, allowing the liquid to flow out of the nostrils. The preparation employed was obtained from an irregular practitioner, and was probably a weak solution of carbolic acid. On using this for the third time, "he felt the water rush into his ears." Both ears felt stopped, and he was immediately quite deaf. Three hours afterwards, blowing his nose was attended with severe pain and crackling. The former continued with intervals of relief for about ten days, when it was followed by a free discharge of bloody serum from both ears. He has lost twenty pounds of flesh.

Examination revealed suppurative inflammation of the tympanum on both sides. There were two perforations of the drum-head in the right ear, and one large slough in the drum-head of the left. The auditory passages were filled with pus, the mastoids tender and slightly swollen. The watch was heard on pressure over the auricle on both sides. At last visit there were indications of extension of trouble to the mastoid cells.

September 18, 1875. A. M. X., aged sixty. Has been snuffing tepid salted water a number of months, for nasal catarrh, and for the last few months has been using the nasal douche with the same liquid. He has received no instructions in regard to the douche except general ones from a friend. He was, however, fully aware of the precautions to be taken to prevent swallowing, and does not attribute his accident to any want of care. Last night, after using the douche, his ear felt uncomfortable. Soon after retiring, he was awakened by severe pain, which continued until morning, when very great deafness came on. This was more noticeable on account of chronic deafness of the other ear.

Acute otitis media was found in the left ear. The drum-head was injected and there was tenderness in the mastoid region. The watch was not heard.

May 1, 1876. C. F. A., aged twenty-six. Never had any trouble of ears. Ten days ago he began to snuff tepid salted water into the nostrils for catarrh, allowing it to pass into the mouth. It was used twice the first day. The second day it was attended by an uncomfortable sensation of the left ear, followed by deafness, and at midnight by pain, obliging him to walk the floor the rest of the night. The following day the ear began to discharge freely, and the pain was relieved. Deafness and discharge continued, and to-day the pain returned with renewed severity.

There was acute otitis media of the left side, with a large perforation of the drum-head posteriorly and tenderness of the mastoid process. The watch was not heard. Leeches and morphia were ordered.

March 21, 1876. K. I. T., aged forty-eight. Reports himself as slightly deaf a number of years, not enough to be inconvenienced. Five weeks ago, by the advice of a friend, he began the use of the nasal douche with tepid salted water for catarrh. Two weeks ago, after employing the douche, his ears felt uncomfortable for the rest of the day, and late in the afternoon there was pain, which continued during the night, preventing all sleep. Deafness was not noticed until the following morning, but he thinks it may have existed the evening before, the severity of the pain preventing his noticing it. The pain continued for one week, more especially at night.

On examination there was found well-marked subacute catarrh of the tympanum on both sides. The watch could not be heard on pressure over either ear.

December 27, 1874. K. X., aged forty-seven. By the advice of a physician, he began the use of the nasal douche with tepid salted water, one year ago, for nasal catarrh. He never had any trouble of the ears. He had used the douche every second day, and occasionally daily. The first of this week, immediately after employing the douche, he noticed a crackling of the ear, with a feeling of fullness. Deafness and pain came on before night. Last night the pain was very severe and he sought advice.

There was found acute otitis media of the left side, the membrane of the tympanum was red and swollen, and the position of the malleus not to be made out. The watch was heard on pressure over the auricle. The Eustachian tube was patent. Ordered leeches to the ear, and inflation by Pollitzer's method. Appropriate treatment followed up for two months resulted in a very great improvement.

April 20, 1876. X. I. H., aged thirty-nine. Had never had any trouble of the ears. Two months ago, for supposed nasal catarrh he bought of an irregular practitioner an appliance for introducing liquids into the anterior nares. The instrument was very much like the douche, and depended for its force on the pressure of the liquid, which

was intended, however, to flow into the mouth. The liquid employed was probably a weak solution of carbolic acid. On using this for the first time, it produced dizziness, and was followed immediately by tinnitus aurium and a stuffed feeling of the head. These symptoms continued, but without pain, till on the third day after employing it, he became very deaf.

Well-marked subacute catarrh of the tympanum was found on both sides. The drum-heads were depressed and injected. He is still under treatment.

April 7, 1876. K. D. Q., aged forty-five. Has been deaf in both ears several years. Has used nasal douche with tepid salted water last five years, usually raising the bottle two feet. Never until this accident had any trouble. Six weeks ago, in using the douche, and before the tube was fairly away from the nostril, he attempted to blow his nose, when the water, as he says, "rushed into his ears." Pain came on in two hours, and continued with great severity for two weeks. During this time he was under the care of his family physician, was leeched, and kept fully under the influence of morphia and hydrate of chloral. There was swelling and tenderness over the mastoid processes, and redness which extended down over the course of the sterno-cleido-mastoid muscle. Deafness in a high degree, with dizziness, came on early.

Acute otitis media was found on both sides. The drum-heads were injected and unusually concave. Slight swelling with redness down the side of the neck. The Eustachian tubes were patent. The watch was not heard in the right ear, but was heard in the left on pressure over the auricle. The power of hearing ordinary conversation was very much impaired.

September 27, 1875. Q. E., aged thirty-four. He never had any trouble of the ears. Three weeks ago, by the advice of a physician, he began the use of the nasal douche with tepid salted water, for catarrh, the reservoir being held about a foot and a half above the head. One week ago, immediately after using the douche, his right ear felt uncomfortable and full. This was followed by severe pain, lasting all night. In the morning the ear discharged bloody serum profusely.

Acute otitis media was found, with a perforation of the drum-head at its lower segment, around the edges of which was a small mass of granulations. The watch was not heard. After two months' treatment he made a good recovery.

March 6, 1876. N. K. D., aged twenty-four. Had never any trouble of the ears. He began the use of the nasal douche, with warm salted water, four days since, by the advice of friends, for catarrh. An hour or two after using it the second time, when blowing his nose, a crackling was heard, followed by deafness of both ears. Pain soon fol-

lowed, preventing all sleep, which was relieved in thirty-six hours by the appearance of a free discharge of bloody serum from the ear. Pain returning, he sought advice.

He had acute otitis media on the right side, with a large perforation of the lower half of the drum-head. The meatus was filled with pus and swollen. There was tenderness of the mastoid processes. The watch was not heard. Treatment was continued for three weeks, when there was suppurative inflammation of the tympanum.

April 10, 1876. N. H., aged forty. Three years ago slight deafness was noticed, which for two years and a half increased perhaps a little. The increase was hardly apparent, and she is in some doubt about it. Six months ago, by the advice of a relative, she began the employment of the douche with tepid salted water every second day. For several months past she has noticed at times, on taking the douche, a crackling of the ears and a very great loss of hearing; this latter is so great that she is now unable to hear ordinary conversation, and can only understand, when spoken to distinctly by a person standing very near; whereas before using the douche she was able to get along with but little difficulty, not only at home, but in public assemblies.

Chronic otitis media was found; no evidence of acute trouble. The watch was not heard in right ear; heard in left ear on pressure.

March 2, 1876. K. G., aged thirty. Is a warm advocate of the douche, having used it herself nearly five years, once or twice daily, with tepid salted water, for catarrh. One week ago, soon after using the douche at night, she was taken with severe pain and deafness of the right ear, followed in the morning by a discharge of bloody serum from the external meatus.

Acute otitis media was found. No perforation of the drum-head could be made out, although it is probable that there may have been one, which had healed. The manubrial plexus of vessels was much injected. Hearing with watch, $\frac{1}{2}$ to $\frac{2}{3}$. Nothing abnormal was found about the naso-pharyngeal cavity.

The douche, which she had used regularly for nearly five years, was discontinued, and four days afterwards she expressed herself as feeling much better without it.

"No. 155, Vol. 4. F. K., aged twenty-five. Otitis media acute. Trouble came on second day after beginning the use of the nasal douche."

"No. 51, E. K., aged twenty-five. Acute otitis media. He has been using nasal syringe for ten days past. Last Saturday, felt uncomfortable in right ear after using it, and was roused early the following morning with severe pain of the ear. He says he has used the syringe with considerable force."

"December, 1875. W. G. T., aged thirty. Otitis media purulenta.

In right ear, sequelæ of scarlatina, twenty years ago. Ear looks remarkably well for one that has discharged so many years. The otorrhœa is slight and muco-purulent. The drum-head is clear and transparent, with a small perforation posteriorly. Cleanliness only was advised."

This patient at the time of his first visit had had but a very slight muco-purulent discharge for many years from the right ear, and it was, for this he sought advice. The left ear he regarded as well, although he thinks the hearing may not have been perfectly normal. It was, however, good, and he was able to get along without difficulty. As stated in the Infirmary record, the drum-head looked clear and free from inflammatory action, and had probably been in this condition for many years, as he states that the discharge was so slight as hardly to be detected, and the ear had not in any way troubled him since childhood. After an interval of four months he comes again May 4, 1876, for advice, with the following story: He consulted an irregular practitioner, in January 1876, received from him a liquid, which he has snuffed into the nostrils twice daily and forced into the ears by the Valsalvian method. He followed this for about a month. It produced a burning sensation in the right ear and a fullness of the left. The right immediately began to discharge freely, and it became purulent. Deafness increased rapidly in the left ear. Attacks of giddiness came on, which increased, obliging him to change his occupation several months ago from carpenter to a private watchman.

On examination a fibrous polypus was found completely filling the right external meatus, with a free discharge of pus. In the left ear, there was injection of the manubrial plexus of vessels, and other indications of subacute trouble. Hearing was very seriously impaired; conversation was heard if clear and distinct within a few feet, but with difficulty.

"No. 1864, Vol. 4. J. D., aged nineteen. Had never had any trouble of the ears. Four days ago, before retiring, he used the nasal douche with tepid salted water, and was roused early in the morning by pain of left ear. There was acute otitis media with perforation of the drum-head at its lower segment."

"No. 631, Vol. 4. J. F., aged twenty-four. Has been using the nasal douche about one year for catarrh, with tepid salted water. Trouble came on thirty-six hours before visit. There was acute otitis media."

"No. 1191. K. C., aged twenty-five. Medical student. One week ago, while using the nasal syringe, which he had employed some time previously, he felt the water go into his Eustachian tubes, and as he thinks into his ears. In an hour and a half the ear began to pain him very severely, keeping him awake all night, and was not relieved by full doses of Dover's powders.

"There was found subacute catarrh of the tympanum on both sides, and mucous râles in both tubes."

"No. 1098. H. C., aged twenty-four. He has never had any trouble of ears. He has snuffed salt and water into nostrils for six months past, and has felt it go into his ears several times and come out again. One week ago it went into the left ear, and was followed by severe pain and deafness, terminating in a discharge of pus from the meatus. There was acute suppuration of the tympanum."

DIPHTHERIA SUCCESSFULLY TREATED.

BY E. CHENERY, M. D., BOSTON.

EVERYTHING looking towards a successful management of this so frequently fatal disease ought to be made known. This is my apology for this article, which is based on one hundred and fifty-eight cases under my care. Most of them were treated in Maine from 1862 to 1866, and the remainder in and about Boston since that time.

I will not waste space on theories, but simply say : (1) The disease is both epidemic and contagious, and so far as the latter manner of spreading is concerned, isolation should be practiced whenever possible. (2) The disease is to be regarded not as a simply local affection, but a constitutional state, having its local expression in the throat, just as typhoid fever is a general disease having its local expression in the glandular structures of the small intestines, or scarlet fever upon the skin and mucous membrane. Hence the rational indications are to deal with diphtheria as a constitutional affection rather than as a local one. And (3) Granting, what is generally admitted, that this constitutional state depends upon some blood-poison, developed through zymotic change, the treatment, to be rational, must look to a suppression of this fermentation. The all-important question then is, Have we any means that will do it? And the object of this paper is to show that we have. I have had diphtheria myself, and so has my family, and I have treated quite a number of cases by the free use, in milk, of a tincture I have named the compound tincture of myrrh (made by digesting an ounce each of capsicum, powdered myrrh, and powdered guaiacum in a pint of alcohol), employing at the same time quinine and the tincture of iron freely, and fomenting the neck with bags of baked potatoes; but I at length came upon a case which forbade hopes from such a treatment alone. This patient was an only child, a girl of six, weakly, thin, pale, scrofulous, with tonsils well-nigh meeting across the throat. Patches had formed over these, and the child was delirious.

Professor Polli, of Italy, had broached the subject of the anti-zymotic powers of sulphurous acid diffused in the system. I was pleased with his statements, and felt that my time had come to make a departure in my case. I sought for the *bisulphite* of soda and, failing to get it,

procured the *hyposulphite*, mixed it with syrup, and gave it to my patient in frequent doses, continuing as best I could my other remedies. Now, whatever be the value of the theory as to the action of such an agent, what interested me the most was the fact that I saved my patient.

My next patient was a little girl, daughter of a sea-captain, whose mother had come with her to visit her friends at the old homestead. At this place resided a brother of the mother, who, two years before, lost all four of his children with diphtheria, and of course they were much alarmed about this case. Believing that the *hyposulphite* of soda did my other patient good, and that theoretically it was adapted to meet a necessity in this class of cases, I resolved to try it again, mixing my quinine with it to save dosing. The next day my patient was better, and soon recovered.

Two girls, the only children, were taken at the same time in an adjoining house. They were treated with the *hyposulphite* and the tincture in the same way, their throats being steamed with the potatoes. They also made prompt recoveries.

I saw in these cases what I had not seen before I began the use of the *hyposulphite*, a prompt suppression of the further spread of the exudation, while the patients began almost at once to improve in feeling and general appearance, and there were none of the sequelæ so common after this disease.

In a neighborhood two miles in another direction, there were about twenty cases coming under my care, and all got well under the *hyposulphite* treatment.

Though diphtheria had proved terribly fatal under other modes of management, I gradually lost my dread of it, and went from house to house treating it and seeing all my cases get well whenever they came into my hands reasonably early and my treatment was fully carried out. In two or three cases, I am sorry to say, this was not done. But in every instance of failure the fault was not due to the remedies any more than a physician is responsible for the life of the patient who has not taken the remedies he has prescribed, or is in a dying state when he is called.

One case, however, of black diphtheria, or diphtheria in which the patches were of a dark color and the general look of the patient was very dusky and stupid, came under observation, and was partially treated by me. No means employed seemed to have any more effect upon the child than the surgeon's knife upon one etherized, so stolid and dead was the little patient from the very onset of the disease. This child's breath was exceedingly offensive before any patches made their appearance. I am inclined to regard this case as a singularly malignant case, over which no human skill could well be expected to

have any control. And it has been the only one I have happened to see which gave evidence on the face of it that medical means would prove unavailing.

To show that it has not been my fortune to have to do with mild cases only, I will record a few instances which to my mind confirm the power which the hyposulphite of soda has over this destructive disease.

In a town twenty miles away, and past at least a dozen physicians, the disease made its appearance, and I was informed that nearly every person who took it died. A clergyman residing there, in whose family I had practiced, made mention of me to one of his parishioners at whose house the disease had appeared, and I accordingly received a summons. The patient was a small girl with strong and thoroughly characteristic symptoms. My usual hyposulphite treatment was resorted to, and she at once began to improve. Her mother was then taken, and afterwards the clergyman's little boy and his wife. They all also recovered.

The next neighbor to the first, on the other side, had ten children and was in good circumstances. Two of the children were absent from home and one other was sent away on the outbreak of the disease, leaving seven at home. Being homœopathic in their notions, their physician was of course sent for. All of the seven took the disease and all died.

The disease broke out in a remote part of the town and one young woman had been sick ten days, and was said to be the only one in that neighborhood to take the disease who had not died. I found her throat covered with thin patches. She was pale and very prostrate, and her friends were cautioned not to attempt to raise her up, lest the heart cease to beat. They disregarded the admonition, and she fainted and was two hours in being restored. Five years afterwards she had not fully recovered from the sickness. The poison had had an opportunity to do its work before proper treatment was applied, hence the extreme and persistent prostration. From such a state of things I fully believe my treatment would have saved her, had it been employed in time. My call, however, was to two of her sisters who were taken with the disease, having violent symptoms. For them the hyposulphite treatment was resorted to in season and the good effects promptly secured, so that they recovered without delay.

In still another neighborhood in the same town was a family of eleven, all of whom had diphtheria except the father. Three of the number had died before I was called. The fourth case was put on the use of the hyposulphite, and got well. The fifth and sixth cases were not treated by me, and died. The seventh was the mother, who was treated with hyposulphite. Her case was not bad. The eighth case was that of an emaciated married daughter of about eighteen, lately confined and so prostrate that it was with difficulty she could cross the room. Her child had died, and I was fearful that we could not save her if she

contracted diphtheria. She did so, however, and was promptly put on the treatment by the hyposulphite and other measures, and came out, only rallying more slowly than others who had more strength when they were taken. Her husband then followed with the disease in a most thorough way, but the symptoms readily yielded to the hyposulphite.

There was a boy of sixteen away on the water, fishing, but soon expected home. I charged his parents as they valued his life not to let him come near the house, but on my last visit to the brother-in-law I found him sitting in the room, and when I told him I was sorry to see him there he replied, "I'm not afraid of diphtheria." A week from that time he was taken down. The neighboring physician was called in, and, not being able to check the disease, the exudation spread to the trachea and he died. Thus out of these ten cases six died and four only recovered. All those treated by me recovered, and all those I did not treat died.

As soon as the son-in-law was able to go to his home two miles away he did so, taking his wife with him. Soon after, his two younger brothers took the disease at the same time, apparently having it brought to them by him. They were both thoroughly typical cases, yet yielded promptly to the same treatment that had saved the others. I might continue to multiply similar cases, but have given enough. The uniformity of the success is what tells.

A physician in a town near Boston recently lost three cases and had another taken with worse symptoms than any of them. He lost confidence in his remedies and resolved to try mine, saying that the child could but die if he did. He saved his case and declared to me he "never saw anything like it."

The dose of the hyposulphite is from five to fifteen grains or more in syrup every two to four hours according to age and circumstances. It can do no harm, but if too much is given it will physic. As much as the patient can bear without physicking is a good rule in the severer cases. The tincture can be used in doses of five drops to a half-drachm in milk. The amount for thorough stimulation is greater than can be taken in water. I usually give it in such doses as can be easily taken in milk, using the milk as food for small children. One fact, however, needs to be borne in mind, namely, the hyposulphite prevents the digestion of milk and should not be given in less than an hour from it. They may be used alternately, however, without interference, in sufficiently frequent doses.

Judging in this disease as I judge in others, I am fully persuaded that the treatment I have so long used and which has not failed me yet will save nearly every case of diphtheria if seasonably and vigorously employed, and there is no reason why it should not do as well in the hands of others as in my own.

In none of my cases have I used any alcohol.

RECENT PROGRESS IN DERMATOLOGY.¹

BY JAMES C. WHITE, M. D.

Permanent Change in the Color of the Hair and Skin after Scarlet Fever. — Dr. Wallenberg, of Danzig, gives an account² of the case. In a man, twenty-one years old, after long-continued desquamation following scarlet fever, the new hairs and skin everywhere presented all the characteristic appearances of an albino. Previously both had been of a brown color. This unparalleled change is attributed by Dr. Wallenberg to the supposed destruction of the pigment layer in the rete and hair papilla by the inflammatory process.

The Treatment of Nævus. — In a discussion upon this subject at a meeting of the New York Medical Library and Journal Association, Dr. Dawson³ said that he was convinced that the treatment of nævus should be restricted to two methods, namely, electrolysis and the use of the galvanic cautery. He objected to the use of heated needles, because they cannot be made to retain their heat until they can be thrust into the tumor to the depth desired. Another objection is the discoloration of the tissues produced by the oxidation of the needle. Objection was also made to the injection of any agent which coagulates the blood. His favorite plan was the galvanic cautery. For the superficial nævi all that is required is such a degree of heat as will radiate into the deeper tissues from the surface. If too intense heat is used, it will be removed with the needle or platinum strip, and the appearance will subsequently be the same as before the application, whereas if the platinum is heated only to a dark-red color, destruction of tissue will not be produced, and the vessels will be made to shrink on account of the effect produced by the radiated heat. For all superficial nævi of moderate size a single thorough application is all that is required to effect a cure. In treating the subcutaneous growths a white heat becomes necessary in order that the knife or needle shall retain sufficient heat to be of service when it has reached the deeper tissues. With very large nævi portions may be destroyed at different times. If too hot a needle or knife from the galvano-cautery is introduced, the hæmorrhage will be as great as after a cold sharp knife.

The Anatomy of Lupus Erythematoses. — Dr. Edward Geber, of Klausenburg, contributes⁴ an important paper upon this subject, and his conclusions, if correct, must modify to a considerable extent the views hitherto generally held by dermatologists respecting its essential character. It has been regarded as an affection primarily and mainly of the

¹ Concluded from page 632.

² Vierteljahresschrift für Dermatologie und Syphilis, 1876, page 63.

³ New York Medical Record, vol. ii., No. 1.

⁴ Vierteljahresschrift für Dermatologie und Syphilis, 111 Jahrg., 1 Heft.

sebaceous glands; Hebra first called it *seborrhœa congestiva*, Geddings demonstrated the anatomical changes in the sebaceous glands in the disease, and Volkmann designated it as "*seborrhagicus*." On the other hand, Neumann showed that the disease might occur upon the palm, where there are no sebaceous glands, and Kaposi that the sweat glands were also materially affected in its course. Now Geber would have us believe, as the result of his most careful examinations of the skin in all stages of the affection, that it is not at all a disease of the glands of the skin, either primarily or essentially. According to him the first appearance of a diseased state is presented by the capillaries of the upper layers of the cutis, which extends from them to the surrounding tissues, and subsequently to the larger vessels in the lower layers, the fibrous structure of the corium and the glandular systems. As the result of an increase of cell elements we have hypertrophy, and later by fatty or other degeneration a shrinking of the tissues and the formation of an atrophied scar. It is only in the later stages that the process extends secondarily to the sebaceous and other glands of the skin from the networks of capillaries surrounding them, and often when the deeper tissues are affected the hair-follicles and sebaceous glands remain free. It is the great abundance of vessels surrounding the follicles, therefore, which determines the seat of the efflorescence about them. The details of the structural changes have been minutely studied by Geber, and are given at length in his communication. They are illustrated by very elaborate drawings. Thin¹ has arrived at the same conclusions with regard to the primary affection of the capillaries.

Lupus and Epithelioma.—In a discussion² on the relations of these affections, which occupied several sessions of the Berlin Medical Society during the past year, the opinions of several well-known authorities with regard to the anatomical position of lupus were stated as follows: Friedländer declares lupus nodules identical with miliary tubercles. Rindfleisch regards it as an adenoma of the cutaneous glands. Busch had exhibited a specimen in which the nodules were shown to be epithelial cancer. Recent examinations of clinical lupus at Leipsic had shown that anatomically it must be divided into lymphoma, adenoma of the cutaneous glands, epithelial cancer, and tuberculosis. Simon agreed with Virchow in regarding it as lymphoma, but thought that the definition of Rindfleisch, above given, applied not to lupus vulgaris but to lupus erythematosus. Lewin expressed a belief in the intimate connection between lupus and epithelioma on account of the frequent transformation of the former into the latter, and gave in support of this view an account of the cases of this kind which have been reported by such observers as Volkmann, Esmarch, Thiersch, Lang, and Hebra. V.

¹ Medico-Chirurgical Transactions, 1875.

² Vierteljahresschrift für Dermatologie und Syphilis, 1875, page 493.

Langenbeck considered the two diseases as entirely distinct, without denying the possibility of the development of carcinoma upon lupous patches after the latter had existed for years without healing perfectly, or from their cicatrices, just as from the scars of burns. In all the numerous cases of lupus which had been under his observation, however, he had known such a combination in only three cases. In reporting the discussion, Auspitz remarks that in such cases it is more probable that the epithelioma starts from the epidermal covering of the lupus than from the real lupus tissue. Volkmann¹ denies the existence of any relationship between lupus and carcinoma, but is inclined to admit a clinical relationship between lupus and scrofulosis and tuberculosis. Anatomically he considers the giant cells more abundant in lupus than in tubercle, and the disposition to retrogressive metamorphosis much less. He would regard the expression tuberculoid as appropriate for lupus.

Leprosy in Upper Italy. — Köbner gives² a very interesting account of a visit to the leper asylum at San Remo during his residence at Mentone winter before last. The hospital was established in 1858, and received from eight to ten patients annually, but during the year and a half preceding his visit not a single new patient had entered it. It is evident, therefore, that the disease, once widely spread throughout this region, and confined in recent times to the three valleys contiguous to the asylum, is rapidly dying out, but the causes of this decline, or the restriction of the affection to these localities, Köbner declares himself unable to determine. The inmates were wholly from the poor classes, and were mostly laborers in the olive and orange groves. Careful observation of the cases confirmed him in the conclusions drawn from his studies of the disease in Norway in favor of a strong hereditary disposition and against contagiousness. He is forced, moreover, to believe in the specific nature of the affection. While discussing thus its ætiological relations, he makes it the occasion to express his opinion of the views published by Kaposi in Hebra's work concerning the peculiar affection described by Wilson under the title morphœa, Kaposi regarding it as a special form of leprosy. Any such relationship between the two affections Köbner refuses to accept as entirely unfounded, except upon a mere resemblance in surface appearances, an opinion in which we entirely concur, as the result of observation of a few cases extended over several years. The form of leprosy occurring in the San Remo asylum is exclusively the tubercular, the anæsthetic variety being unknown there.

Leprosy in Palestine. — London³ reports a case of elephantiasis Græ-

¹ Vierteljahresschrift für Dermatologie und Syphilis, from Berliner klinische Wochenschrift, No. 30, 1875.

² Vierteljahresschrift für Dermatologie und Syphilis, 111 Jahrg. 1 Heft.

³ Vierteljahresschrift für Dermatologie und Syphilis, 1875, page 540.

corum in illustration of the form and course of the affection as it occurs in the region round about Jerusalem. In his opinion the disease is not contagious, but is hereditary, inasmuch as it can be traced in direct line down through many families, often skipping a generation. The districts in which it mostly prevails are those in which intermittent fever is endemic to a great extent. The government treats these miserable lepers with shocking neglect.

Leprosy in Trinidad. — Espinet, in his report of the leper asylum for 1874,¹ states that the disease is confined principally to the poorer classes, but affects all races, Italians, Poles, Englishmen, and Irishmen, after some years' residence. It is most common amongst the Portuguese and Hindoos. He thinks that the latter, immigrants, have it by inheritance, and that the period of incubation may be prolonged even beyond the fourteen years assigned by Professor Boeck as the maximum. He has never seen its development in children earlier than the third or fourth year, and believes that in certain cases it is contracted accidentally.

Chloral Hydrate as a Local Application to Ulcers. — Mr. Lucas,² of Guy's Hospital, gives the results of his trials of solutions of chloral hydrate in the treatment of various kinds of ulcers, varying in strength from two to four grains in an ounce of water. The application is generally attended by considerable smarting, which becomes less after each successive application. Foul ulcers quickly become sweet, and all forms heal more promptly.

The Treatment of Pruritus by the Smoke of Juniper Needles. — Dr. Cäser Boeck, of Christiania, reports³ the results of this remedy as employed by his late distinguished father against itching in several cutaneous affections in which this forms the most distressing symptom, especially urticaria, pruritus, and prurigo. The patient is inclosed as if for an ordinary metallic vapor bath, and beneath him, with proper precautions against the blaze which may ensue, is placed a pan of live coals upon which have been thrown the juniper leaves. If not freshly picked, the needles should be dampened with water. The patient remains exposed to the vapors for twenty or thirty minutes, generally on every second day. In prurigo the remedy is immediately effective, and many cases have been discharged from the hospital, treated in this way alone, as cured. The most marked effects, however, are obtained in desperate cases of chronic urticaria and pruritus cutaneus. Such patients hitherto treated in this way by Dr. Boeck have all recovered after a few smokings, and without a recurrence even. The action of the remedy he regards as analogous to that of the tars, but not reciprocal. In chronic

¹ London Medical Record, December 15, 1875.

² Lancet, October 16, 1875.

³ Ueber Wachholderräucherungen in die Hauttherapie. Vierteljahresschrift für Dermatologie und Syphilis, 1875, page 463.

eczema and other affections of the skin its effects have not yet been fully tested. He recommends it to the notice of dermatologists as a promising therapeutical agent, reserving for a future opportunity a more explicit account of its effects.

Alopecia Areata. — Dr. Horand¹ contributes an historical and critical communication upon this obscure affection, in which he discusses at great length the question of its parasitic nature. He has been unable to find in the cases observed by him the presence of any vegetable growth, therefore he does not believe in its cryptogamic origin. His efforts to inoculate the disease by applying to the skin of young dogs and to the scalp of a child the epidermal matter taken from a case were negative; on this account, and from the failure of the disease to transfer itself from one child to another among the patients in his service, he concludes that it is not contagious. Cases cited by other observers of transference from one member of a family to another, or of its communication from one to several members of a school, he would explain in the first instance on the theory of hereditary predisposition to the affection, in the second on the assumption that it had been confounded with tinea tonsurans. As to what its nature is he does not express positive opinions, but inclines to the belief that it is some disorder of nutrition of the hairs, due to some nerve-lesion. The whole subject is ably handled, though not wanting in the usual dogmatic inferences from purely negative observations which appear to be inseparable from its discussion, but it cannot be claimed that he presents new or important data bearing upon the aetiology of the affection, nor does he sufficiently discriminate with regard to its clinical variations, which suggest the probability of quite distinct pathological processes. In its treatment he considers the application of croton oil as superior to all other remedies.

Boric Acid in the Treatment of Ringworm. — Surgeon-Major Watson² reports in the *Indian Medical Gazette* the successful treatment of all forms of tinea tonsurans by the application of this substance. The affected parts are thoroughly bathed with a saturated solution of the acid in water, or in the proportion of a drachm to an ounce, twice daily. Of relapses after apparent cures he says nothing.

Rubber Cloth in Skin Diseases. — Besnier³ gives the results of the use of this and other impermeable coverings in the treatment of certain cutaneous diseases. They agree with those, so well known, of Hardy and Hebra. The principal effect is one of maceration, and is the same whether the vulcanized or pure fabric is used.

¹ Considérations sur la Nature et le Traitement de la Pelade. Annales de Dermatologie et de Syphiligraphie, tome sixième, No. 6.

² American Journal of the Medical Sciences, 1876, page 277, from London Lancet.

³ Bulletin général de Thérapeutique, 1875.

Pick¹ also recommends the revival of the use of rubber in the treatment of those affections accompanied by undue dryness of the skin, as eczema squamosum, psoriasis, ichthyosis, the keratoses, and xeroderma.

MEMOIR AND CORRESPONDENCE OF CAROLINE HERSCHEL.²

"GREAT men and great causes have always some helper of whom the outside world knows but little. There always is, and always has been, some human being in whose life their roots have been nourished. Sometimes these helpers have been men, sometimes they have been women, who have given themselves to help and to strengthen those called upon to be leaders and workers, inspiring them with courage, keeping faith in their own idea alive, in days of darkness,

‘When all the world seems adverse to desert.’

These helpers and sustainers, men or women, have all the same quality in common — absolute devotion and unwavering faith in the individual or in the cause. Seeking nothing for themselves, thinking nothing of themselves, they have all an intense power of sympathy, a noble love of giving themselves for the service of others, which enables them to transfuse the force of their own personality into the object to which they dedicate their powers."

Such a helper was Caroline Lucretia Herschel to her brother, Sir William Herschel, the distinguished astronomer. The book which lies before us is the record of her life and labors as the assistant of her brother. It consists chiefly of her letters and recollections, which are pleasantly and appropriately woven into a continuous narrative by the editor, Mrs. John Herschel. The recollections, which she wrote when more than eighty years old, were prepared for her nephew, Sir John Herschel. The memoir is a record of rare self-sacrifice and unswerving devotion to her brother and to the cause to which he gave his life. It is more than this. It shows the steps by which one whose early education was of the most meagre character gradually learned not only to render invaluable assistance to her brother in his astronomical studies, but to become herself an original observer of such excellence, accuracy, and originality that the learned societies of Europe vied with each other in the honors which they conferred upon her.

She was born at Hanover, in Germany. There she passed her childhood, and there she received the early education and accomplishments which are described by herself in the following language: "My father wished to give me something like a polished education, but my mother was particularly determined that it should be a rough but at the same time a useful one; and nothing further, she thought, was necessary but to send me two or three months to a sempstress to be taught to make household linen. Having added this accomplishment to my former ingenuities, I never afterwards could find leisure for

¹ Allgemeine Wiener medizinische Zeitung, February, 1876.

² *Memoir and Correspondence of Caroline Herschel*. By MRS. JOHN HERSCHEL. With Portraits. American Edition, from the English. New York: D. Appleton & Co.

thinking of anything but to contrive and make for the family in all imaginable forms whatever was wanting, and thus I learned to make bags and sword-knots long before I knew how to make caps and furbelows." With this scanty intellectual training, the maker of caps and furbelows, when scarcely twenty-two years of age, went from Germany to England to become her brother's assistant and a world-renowned astronomer. For fifty years she toiled with an industry and zeal that compel alike our admiration and our wonder, at the side of her brother. What she accomplished during these fifty years was eloquently told by the vice-president of the Astronomical Society on the occasion of the presentation of the society's honorary medal to Miss Herschel. After enumerating Sir W. Herschel's contributions to astronomical science, the vice-president went on to say, "A most important part yet remains untold. Who participated in his toils? Who braved with him the inclemency of the weather? Who shared his privations? A female. Who was she? His sister. Miss Herschel it was who by night acted as his amanuensis; she it was whose pen conveyed to paper his observations as they issued from his lips; she it was who noted the right ascensions and polar distances of the objects observed; she it was who, having passed the night near the instrument, took the rough manuscripts to her cottage at the dawn of day and produced a fair copy of the night's work on the following morning; she it was who planned the labor of each succeeding night; she it was who reduced every observation, made every calculation; she it was who arranged everything in systematic order; and she it was who helped him to obtain his imperishable name. But her claims to our gratitude end not here; as an original observer she demands, and I am sure she has, our unfeigned thanks. Occasionally her immediate attendance during the observations could be dispensed with. Did she pass the night in repose? No such thing; wherever her brother was, there you were sure to find her. A sweeper planted on the lawn became her object of amusement; but her amusements were of the higher order, and to them we stand indebted for the discovery of the comet of 1786, of the comet of 1788, of the comet of 1791, of the comet of 1793, and of the comet of 1795, since rendered familiar to us by the remarkable discovery of Encke. Many also of the nebulae contained in Sir W. Herschel's catalogues were detected by her during these hours of enjoyment. Indeed, in looking at the joint labors of these extraordinary personages, we scarcely know whether most to admire the intellectual power of the brother or the unconquerable industry of the sister. In the year 1797 she presented to the Royal Society a catalogue of five hundred and sixty stars taken from Flamsteed's observations, and not inserted in the British catalogue, together with a collection of errata that should be noticed in the same volume." (Pages 223, 224.)

What a contrast is here presented! The German maiden of twenty, whose accomplishments comprised a knowledge of household work, the mastery of the needle, and a few "ingenuities," became in fifty years, by her own efforts, with only occasional hints from her brother, the distinguished astronomer, skillful in tracing the courses of the stars and in discovering the hiding-places and wanderings of comets. We refer all who are curious to know how this metamorphosis was effected, and who are interested to learn how much patient

self-sacrifice, unceasing industry, and devotion to science can accomplish, to the memoir from which these extracts are taken. It is a story worthily told of a noble life.

E. H. C.

BALFOUR ON THE HEART AND AORTA.¹

SUCH important advances have been made in the diagnosis and treatment of cardiac disease in recent years that very few of our books afford us a proper understanding of the state of knowledge in regard to them. Dr. Balfour's book does this, perhaps, better than any other in the English language. It does not profess to be a complete treatise on diseases of the heart, but includes the substance of clinical lectures delivered by the author at the Royal Infirmary, Edinburgh. The cases which are introduced as illustrations are not too numerous, and are chiefly those of "patients who have passed from the clinique to the domain of morbid anatomy." We would call the attention of the profession particularly to Lectures VI. and VII., On Curable Mitral Regurgitation and On Curable Tricuspid Regurgitation, and also to Lecture XIV., On the Action of Digitalis, etc. Many will be surprised to learn here for the first time that not only some regurgitations, but also some kinds of enlargement of the heart, are really cured.

Since digitalis has been found to be a cardiac tonic instead of a sedative, there has been no sense in the hesitation of the profession to use it in cases of aortic regurgitation with dilatation of the left ventricle, but on the contrary every reason for its use, and this use of it Dr. Balfour very strongly urges.

We cannot begin to point out the good things in the book, but advise all our readers who wish to brighten their knowledge of cardiac disease to read it. The author shows throughout a remarkably thorough and even knowledge of English, French, and German literature on the subject; hence we are particularly sorry to note a serious blunder (page 107 and page 155, note) in regard to Professor Flint's three cases of presystolic murmur at the apex of the heart, in which aortic but no mitral disease was found post mortem. If Dr. Balfour had read the page of Professor Flint's work, to which he refers, with ordinary care, he would have learned that Flint by no means considered that the presystolic murmur in these cases was produced directly by the aortic regurgitant current, but that the mitral valve, being floated out by the regurgitating blood at the beginning of diastole, stood as a temporary obstruction to the blood as it was propelled by auricular contraction from the auricle to the ventricle at the end of diastole. Moreover, no one could state more distinctly, or dwell more emphatically on the peculiar character of the presystolic murmur than Professor Flint, and yet Balfour implies that he does not appreciate this.

In reading the book one cannot help feeling that the author is a little too positive in many of his statements, but this style is perhaps the one best adapted to clinical teaching.

The paper and print are excellent.

¹ *Clinical Lectures on Diseases of the Heart and Aorta.* By G. W. BALFOUR, M. D., etc. Philadelphia: Lindsay and Blakiston. 1876.

PROCEEDINGS OF THE MIDDLESEX SOUTH DISTRICT
MEDICAL SOCIETY.

CHARLES E. VAUGHAN, M. D., SECRETARY.

APRIL 21, 1876. — DR. CHAPIN, of Somerville, read the annual address.

The most prevalent diseases in Somerville during the past year have been consumption, scarlet fever, and diphtheria. Consumption has prevailed in all localities, high and low, wet and dry, preferring the low and wet. The mortality has been greater among the Irish than any other race. The high lands, mostly occupied by Americans, have been least visited, but not exempt. From sixteen to twenty per cent. of all deaths have been from consumption.

Scarlet fever has been mild, and mortality no larger among poor than rich. It is undoubtedly contagious, and there is no known security against it, but isolation. Children from infected houses should not be allowed to attend school.

Typhoid fever has prevailed especially in low and wet lands; mortality not large. Few cases on the hills, or in the Miller's River region, which has recently been filled with gravel from the hills. There has been more along the Fitchburg Railroad, between East Cambridge Crossing and Porter's Station, where the houses do not generally drain into sewers. In the westerly part, where there are no sewers, to carry off even surface water, cases have been more numerous, especially in a brick-making community where the North Cambridge physicians are generally employed. They have tried to impress the city government with the need of good drainage.

While we have clearer views of the nature and causes of some diseases, as to the above-mentioned maladies we are still in the dark.

DR. HOSMER read a paper suggested by a series of obstetric cases, the argument being the probability of a certain increasing septic condition of late, which has enhanced within his experience the dangers of child-bearing to the woman, and the anxiety of the physician. Two simultaneous fatal cases were instanced.

CASE I. — Mrs. B., aged thirty-three, of fair general health, gave birth to her third child at term, May 4, 1875. Labor was short, easy, and natural; everything satisfactory until the fourth day, when metritis set in. Uterus hard, swollen, tender, and painful. There occurred a well-marked and moderately severe rigor. Abdomen tympanitic. Lochia lost color but remained free. No fœtor for several days. Bowels sluggish; micturition normal. No nausea nor vomiting. Lacteal secretion diminished. On the eighth day, symptoms were improved; convalescence seemed beginning. On the ninth day, some dysuria; slight fœtor of lochia; occasional pain in epigastrium; milk was disagreeable to child. Tenth day, vomited; urine sufficient in amount and normal. Eleventh day, nausea and vomiting in night; no urine or action of bowels; no milk. Twelfth day, no urine; bowels resist efforts to move them. Constant nausea; vomited a little greenish water. Extensive extravasation under conjunctivæ of both eyes and the greater part of left upper lid. Temperature hardly 100°. Pulse 84, nearly natural in strength. Stomach be-

came and remained quiet. Slight epistaxis. Evening, some discomfort in lower part of abdomen, ascribed to enema. Two ounces of urine passed; first for sixty hours. Thirteenth day, four A. M., no sleep. Restless and chilly. Pulse feeble and unsteady. Skin cool, slightly clammy. Mind clear. Eyelids swelled and deeply discolored. Vision imperfect. Urine clear but largely albuminous. Sank rapidly and died at seven A. M. Numerous spots of extravasation appeared on face, fore-arms, and hands. Putrefactive changes began immediately after death. No autopsy allowed.

CASE II. — Mrs. C., aged thirty, fresh and healthy looking, was delivered of third child at end of eighth month, May 5, 1875. Labor quiet, comfortable. Everything went well until the eleventh day, when child died suddenly, without known cause. Shock to mother great. Fourteenth day, in bed; appetite gone. Tongue slightly coated. Slight bad taste. Seventeenth day, seven P. M. Disturbance of stomach had increased until vomiting was quite troublesome. Countenance for the first time anæmic. Urine diminished, but no specimen could be obtained. Pulse slightly depressed. No actual evidence of sinking. Later in evening patient was rolled on a couch at bedside. Cheerful; said she felt perfectly well, nausea and vomiting having ceased from time of last visit. Nine and a half P. M. Died without any known premonition, in less than two minutes from last utterance. No autopsy allowed.

There are necessary defects in the clinical record of this case, and the end is mysterious. Embolism readily suggests itself, but there are other possibilities, as hæmorrhage into the medulla oblongata.¹ Conclusions as to pathology without direct evidence are to be avoided. A doubtful case should not weigh in the scale of evidence.

The impression of danger excited by the first case is strengthened in the second. As the patients lived more than three miles apart, no relation to common cause as to place is involved.

A series of severe cases reported before the Obstetrical Society, and published in the *JOURNAL* of July 15, 1875, confirms the impression of danger suggested by these two cases. I think that our seniors in practice, whose experience relates to a cleaner and purer period, will say that a death in childbed was once a rare event. As some accidents of local influence may affect the calculation, I wished to compare my own impressions with such as can be collected in a larger field. The two accompanying tables are compiled from the Registration Reports of the State of Massachusetts for the years 1867 to 1873. Each consists of two parts, one relating to the State and the other to the County of Middlesex. In the first table the whole number of deaths is given, and also the number from childbirth, puerperal fever, erysipelas, scarlatina, and diphtheria, the latter involving septic influences. The second table takes the number of deaths for 1867 as unity, and reduces to that basis the figures for each year. The columns show the whole number of deaths, those from childbirth and puerperal fever, those from erysipelas, and those from scarlatina and diphtheria.

¹ See a case in the *Boston Medical and Surgical Journal*, xciii. 696, where death occurred on twelfth day after confinement.

TABLE I.
STATISTICS FOR THE WHOLE STATE.

	Population.	Whole No. of Deaths.	Childbirth.	Puerperal Fever.	Erysipelas.	Scarlatina.	Diphtheria.
1867	1,267,031	22,772	189	40	144	828	251
1868	—	23,603	194	68	166	1,369	297
1869	—	26,054	222	61	183	1,405	296
1870	1,457,351	27,329	227	66	132	683	242
1871	—	27,943	212	49	201	867	274
1872	—	35,019	249	65	212	1,377	273
1873	—	33,912	270	98	235	1,472	310

MIDDLESEX COUNTY.

1867	220,384	4,292	37	8	24	131	62
1868	—	4,978	44	19	33	350	45
1869	—	5,072	66	9	32	365	53
1870	—	5,315	46	13	21	79	56
1871	—	5,583	37	12	40	163	56
1872	—	6,743	46	23	42	223	48
1873	—	6,764	71	22	44	294	49

TABLE II.

PERCENTAGE OF CHANGE FOR THE WHOLE STATE, THE FIGURES OF 1867 BEING
TAKEN AS UNITY. INCREASE OF STATE POPULATION, 1865 TO 1870=1 TO 1.15.

	Deaths. — Total.	From Childbirth and Puerperal Fever.	Erysipelas.	Scarlatina and Diphtheria.
1867	1.	1.	1.	1.
1868	1.12	1.14	1.15	1.54
1869	1.14	1.23	1.27	1.57
1870	1.20	1.28	.90	.85
1871	1.22	1.14	1.40	1.+
1872	1.53	1.37	1.40+	1.53
1873	1.48	1.60	1.63	1.65

PERCENTAGE FOR MIDDLESEX COUNTY. INCREASE OF POPULATION, 1865 TO 1870=1 TO
1.24.

1867	1.	1.	1.	1.
1868	1.16	1.46	1.37	2.
1869	1.18	1.66	1.33	2.16
1870	1.24	1.31	.87	.69
1871	1.30	1.09	1.66	1.13
1872	1.57	1.53	1.75	1.40
1873	1.575	2.+	1.83	1.26

Such a table is necessarily defective, as it cannot give the number of deaths from exceptional causes, as railway and other disasters, and does not give any clew to the number of cases of puerperal trouble that do well. In these some deterioration may perhaps remain, which at a later date may be a factor in a fatal illness.

A glance at the second table will show that the figures opposite 1873 in any vertical column are larger than those opposite 1867, there being a pretty regular increase through the series. Further, a comparison shows that the percentage of deaths from the causes enumerated is larger than that of the general death-rate. But, on the other hand, we have a different result if we find in any of the vertical columns the sum of the figures for the first three years and for the last three. In the total number of deaths the increase in the second triennial period is .3 in State and county, and the rate of increase from childbirth and puerperal fever is .24, and the rate of increase is less than that which appears in the whole number of deaths. From erysipelas the increase for the State is .3, for the county .4. From scarlatina the increase in the State is almost exactly the same in the two periods, while in the county the rate is only .68.

Again, the population of the State increased from 1 in 1867 to 1.18 in 1873. The death-rates from childbirth and puerperal fever, and from erysipelas, increased from 1 to 1.6 in the same period. The population of the county increased from 1 to 1.3, and the death-rate from above causes increased from 1 to 2 and from 1 to 1.83, respectively. As the mortality from these causes increased in a ratio more rapid than the gain in population, the disproportion being greater in the county, it follows that a larger percentage died from puerperal causes in 1873 than in 1867. These figures require correction, of course, for the variation in the annual birth-rate or number of labors, and in the relative number of males and females in the whole community. How great a difference this would make would take too much time to determine.

Dr. WYMAN made some remarks upon paracentesis and aspiration in pleurisy.

In two recent numbers of the *American Journal of the Medical Sciences*, are two essays upon a Century of American Medicine and Surgery, mentioning, with many other improvements, puncture of the chest. We are aware that this is not a new thing. Five hundred years before Christ, Hippocrates taught the use and manner of the operation. Diagnosis of water and air in the chest was made by succussion and other means, percussion being unknown. Galen, A. D. 50, invented an instrument for the operation. Pliny laughs at the doctors for not recognizing pus in a man's chest. The patient afterward received a spear-thrust in battle, which gave vent for the pus. His enemies did for him what his friends could not. About 1761 Avenbrugger published a work on percussion of the chest. In 1808 Corvisart published a translation of the work, with comments. He states that to his knowledge the practice of percussion was never taught.

In 1816 Laennec published his discoveries. After this more attention was drawn to the relief of pleuritic effusion by surgical means, and the practice gradually gained ground. In England it was occasionally practiced, but the efficacy and policy of it were considered dubious. It was a serious operation.

In 1850 Dr. Wyman had a patient with acute pleurisy, with the chest full of fluid. Case seen by Dr. J. Homans in consultation, who agreed that there was much danger in the case. Surgical relief would be useful, but he had

never known the operation to be done. That evening he consulted some of the leading Boston physicians, who did not encourage the operation. The puncture was made, however, with a small trochar, and twenty ounces of clear serum drawn off. A trochar of larger calibre was made, and the serum again drawn off with the stomach pump. Recovery followed. In April of the same year Dr. Bowditch had a case of serous effusion. Dr. Wyman saw it with him. When preparations were completed for puncture, the man with whom the patient boarded said that he had made inquiries, and that the operation was never done by good physicians, and that murder should not be done in his house. There was much excitement in the town, and the population generally took sides for and against. A young lady dreamed that the young man was carried to the grave and buried alive, but was rescued by the opposition party. Another place was obtained, and with the same instrument bloody pus was removed, demonstrating that serum and pus could be removed by means of an opening so small that no marked inflammation would ensue. Several operations were done during the year by Drs. Bowditch and Wyman. In the mean time it became known abroad. There was a German translation of an article by Dr. Bowditch, in 1852, in which the "Wymansche Operation" is described. Thanks are due to Dr. Bowditch for the pains he has always taken to give Dr. Wyman the credit of the original operation.

Within three years a work on Aspiration, by Dieulafoy, has appeared, in which he says that there never was aspiration or an aspirator until 1864; that many have had syringes and trochars, but no one has combined them. Yet his instrument is essentially the same as that used in these operations and since — an exhausting syringe attached to a trochar. Dieulafoy has undoubtedly done a great deal in applying the principle, although the adaptation has been made here to a variety of uses.

The operation being easy and simple, there is danger that it may be done too hastily. It is not required in ordinary acute pleurisy. Laennec says that he never knew an uncomplicated case prove fatal. Trousseau and Graves have found a few. Pus has been seen to follow serum so closely that it may fairly be attributed to the puncture, or to the rubbing together of the acutely inflamed surfaces. The effusion will generally be absorbed naturally. If not, after a reasonable time, and if there is any danger of consolidation, it may be drawn. For illustration, if a fresh blister is punctured, it fills again. If we wait until a certain change has taken place, it does not refill. The original instrument was exhibited.

DR. MARCY said that he heard the whole subject discussed in a German clinique, with the conclusion that it is a "schwere sache."

DR. CUTTER spoke of a case of cancer in which dullness over the whole side of the chest led to a mistaken diagnosis of effusion.

DR. COTTING confirmed Dr. Wyman's remarks from personal knowledge. He understood that it is on the application of the principle to acute cases that Dr. Wyman's claim to priority rests. Dieulafoy's application consists in exhausting the cylinder before applying the instrument.

DR. WYMAN remarked that, as many times as he has performed the operation, it is always a relief to see the fluid.

DR. MARCY stated that he has his trochars perforated at the sides.

DR. WYMAN said that Dieulafoy has done this. His own are cut off obliquely.

In answer to a question, DR. WYMAN stated that he has never known a patient to die during the operation.

DR. COTTING said that in one case of his this had happened, but that the lung was riddled by consumption.

DR. DRIVER had had a case of ovarian dropsy, in which the contents were almost a jelly, and could not be drawn by Dieulafoy's or Codman and Shurtleff's instruments. An adaptation of Dr. Wyman's instrument removed thirty-two to forty ounces.

DR. WYMAN spoke of a case in the Massachusetts General Hospital, soon after Dr. Bowditch's first case. It was carefully examined by Drs. Bowditch and Jackson, and by himself. Fortunately a slight nervous râle was heard. The patient died with cancer two days later. One symptom has always proved of great value, namely, the existence of vocal fremitus.



THE NATIONAL MEDICAL LIBRARY.

In the JOURNAL for May 11th some remarks were made on the proposed catalogue of the National Medical Library, and of the advantages to be looked for when this mine of wealth should be laid before us in a tangible shape. Looking on this subject as lovers of books, one or two practical suggestions occur to us in regard to the form and style of the work in hand. When so important a work is to be undertaken, due consideration should be given to the actual wants of those who are to use it. The hard-worked members of our profession have little time to acquire the knowledge *how to use a library*; this is an art in itself, which those only who are versed in the details of hard study and investigation can easily acquire. If the contemplated work is to fulfill the rôle which we believe is intended, to make it a *thoroughly practical* aid to the average medical man, it must be put in the shape which can be most easily handled, and so arranged as to be understood in all its details *at a glance*.

The first query proposed by the librarian for solution is intended to call out replies from those who are conversant with medical books and the administration of libraries, regarding what is known as the single alphabet system. In former issues of the medical catalogue separate lists of the books were made, by authors and by subjects. This method has been adopted in the Congressional Library and other institutions. It implies a more extended knowledge of books and authors than is possessed by the general reader, and moreover necessitates consulting two lists before the presence of the book in the library can be ascertained. On the other hand, the custom of combining the lists, putting the authors and the subjects in dictionary form in the same catalogue, has been successfully carried out in the Boston Public Library, the Boston Athenæum, and in the majority of other libraries. It might seem as if such a question were one of minor importance. It must, however, be borne in mind that the catalogue is to be used by those whose first aim is to ascertain not

only what authors are to be found, but who wish to know where they can best acquire information on some special topic. They wish to illustrate the subject which is most prominent before them, and to find out all that medical literature can give on the subject. Such a consideration, it seems to us, should induce the librarian to adopt some plan which would afford the most comprehensive as well as the most tangible form. The new catalogue of the Boston Athenæum has justly received the highest encomiums from those versed in bibliography. Its authors and subjects, with the numerous cross references, insure a facility and a certainty of finding both book and topic where only the faintest knowledge of what was needed can be obtained. We understand that the field of medical literature is to be laid open by a generous distribution of the medical catalogue to the profession. Let this arrangement be so simplified that no doubt can exist, and that it may be made most serviceable to the greatest possible number.

We cannot fail to notice the admirable plan proposed of digesting the medical journals and other works of ephemeral literature in order to give ready access to articles written on special subjects and cases illustrative of special diseases. These results have been obtained by the careful examination of about five thousand volumes of medical periodicals, transactions, and collections.

"All medical writers know that the most valuable part of medical literature consists of the records of cases and original observations, and that, for the present century, the greater part of such records are contained in periodical publications. These are difficult to obtain and preserve, occupy a large amount of space, and, even when accessible, require much time and labor to consult. It is not very difficult, although rather expensive, for a physician who is interested in a particular subject to obtain all the really important monographs relating to it; but that which he cannot obtain, and which he must look to large public libraries to supply, are all the journals and transactions containing the most valuable data for his purpose." Every medical writer and student can appreciate the assistance he has derived from reading articles written by men in the same train of thought with himself. General works on the various branches of medicine treat subjects in a manner which serves well for the medical student in his first comprehensive review of a subject; but they are totally inadequate to the practitioner who wishes to go further into the subject and draw his deductions for actual, every-day work. Hardly a dozen lines are given in most treatises to umbilical hæmorrhage in the infant; and only in the full and satisfactory brochures of Minot and Foster, Hawkins and other writers can really useful information and statistics be found. Abortion is better treated by many writers, but the literature of the subject is made tenfold more valuable by the references, covering many pages in the specimen fasciculus of Dr. Billings. It is the object of the librarian of the medical library to bring out such material of the most valuable character, long hidden in out-of-the-way places, and, in addition to text-books, to give us monographs. The labors of the librarian in this direction are of untold value.

MEDICAL NOTES.

—The Paris correspondent of the *British Medical Journal* gives the following account of Tillaux's remarks at the Lariboisière on torsion. We imagine that his first statement will hardly pass without contradiction. "M. Tillaux stated that up till now torsion had been applied by other surgeons to only small arteries, but he has also applied it to the larger arteries, and after having practiced this method for the last five years he has come to the following conclusions: (1.) Torsion is applicable to all arteries, and particularly to the larger ones. (2.) A single pair of forceps is sufficient, and not two pairs, as employed in England and elsewhere. (3.) The artery should be seized obliquely, and not longitudinally, and in such a manner that the three coats in their entire breadth should be included in the grip. (4.) The torsion or twisting of the arteries should then be practiced until the portion seized becomes detached. (5.) It is unnecessary to adopt measures to limit the extent of the torsion, as practiced by Amussat and the English surgeons, as the operation limits itself either to the part seized or one or two centimetres above it. (6.) Torsion is applicable to atheromatous or inflamed arteries, as well as to arteries in a healthy condition. (7.) Torsion favors union by the first intention, owing to the absence of a foreign body, as in the case of ligatures. (8.) Like the ligature, torsion prevents primary hæmorrhage. (9.) Torsion acts more effectually than the ordinary ligature in preventing secondary hæmorrhage. M. Tillaux asserts that ever since he began to employ torsion, in 1871, he has never had a single case of primary or secondary hæmorrhage, and yet he has practiced it in about a hundred cases of capital operations."

—Mr. Annandale, of Edinburgh, has operated for the radical cure of two herniæ, one femoral and the other inguinal, on the same side and in the same patient, a man of forty-six. The operation consisted of tying the necks of the pouches with antiseptic catgut, having of course first exposed them. Three months later the femoral hernia had reappeared, but the inguinal had not.

—We regret to learn that the sentimentalists have succeeded in overcoming Professor Schiff. The following, with which we quite agree, is from the *Medical Press and Circular*: "The anti-vivisectionists in Italy have achieved a small victory in having driven Professor Schiff, the distinguished experimental physiologist, from the chair which he occupied at Florence with so much industry and so great advantage to humanity. His departure, says the *Gazetta Medica di Lombardia*, is not only a blow to science, but to common sense and true philanthropy. But the Florentine 'Società Bestiofila' will have little cause for rejoicing at its victory, since neither is Professor Schiff the originator of vivisections, nor will his successor, whoever he may be, be able to do without this now indispensable condition of progress of biological science."

—A simple mode of extracting calculi arrested in the urethra is described by J. C. O. Will, M. D., in *The Lancet* of May 13, 1876. The process is that of snaring the calculus by a loop of wire. For this purpose a loop of tolerably thick silver wire is passed down the urethra and behind the calculus. The difficulty is not in the snaring but in the retaining of the hold, the loop being apt to slip, especially if the foreign body be a very small one. To over-

come this difficulty, after the loop of wire has passed well beyond the calculus a canula is to be slipped over the projecting ends of the wire, and its point brought to bear against the stone, by which it will be steadied; then by making slight traction on the free ends of the wire the loop will be brought against the calculus, which will thus be securely fixed between the wire and the mouth of the canula. The ends of the wire may then be twisted around the rings with which the canula is provided at its proximal extremity, and the apparatus withdrawn. An efficient canula can be extemporized by cutting a bit out of an old catheter, and in some cases the wire loop itself will be all-sufficient.

A HOMŒOPATHIC SWINDLE.

MESSRS. EDITORS,—In the number for May 18th last of your valuable JOURNAL, which reached me a few days ago, I see as leading article A Case of Extra-Uterine Pregnancy, by Martin A. Tinker, M. D., Brooklyn, N. Y., with the foot-note, “Read before the New York Obstetrical Society, March 21, 1876,” thereby intimating that the author read this paper before that society.

Inasmuch as “Martin A. Tinker, M. D.,” although a graduate of a regular school, the University of New York, is now and has been for years an irregular practitioner of the homœopathic persuasion, and is thereby prohibited from attendance at the meetings of the New York Obstetrical Society and all other regular medical societies, a fact of which you, Messrs. Editors, no doubt were unaware, I think it due to the New York Obstetrical Society, as well as to you and your esteemed JOURNAL, to state the true facts of the case, in order that you may make whatever correction you see fit.

Dr. Tinker's paper on “extra-uterine pregnancy” was read before the New York Obstetrical Society at the meeting above referred to, by Dr. John Byrne, of Brooklyn, late president of the society, who prefaced the reading by remarking that the paper had been handed him by Dr. Tinker, an “irregular,” to present to the Obstetrical Society for membership; that he (Byrne) had told Tinker that he was not eligible on account of that irregularity, but on Tinker's insisting, he (Byrne) took the paper, saying that he would see what could be done, but with the sole purpose of imparting the case, as one of rather unusual interest, to the society. Having been read, it became the property of the society, and was to have been published, with due note of the circumstances under which it came before the society, in their transactions. This, of course, is now out of the question.

The chief object of my communication is, however, to free the New York Obstetrical Society from the imputation, which persons knowing Dr. Tinker's professional position and ignoring the real facts might ascribe to it, of having admitted an “irregular” practitioner to its meetings.

Yours truly,

PAUL F. MUNDE, M. D.,
Secretary New York Obstetrical Society.

NEW YORK, 20 West 45th Street, June 1, 1876.

We are much obliged to Dr. Munde for this communication, and deeply regret the deception that has been practiced on us. We are sure none of our

readers will doubt that we were ignorant of the fellow's standing, and they probably would have thought, as we did, that the statement that the paper was read before the New York Obstetrical Society was a guarantee at least of respectability. As to the man Tinker's dirty behavior, we can only say that it is doubtless characteristic of himself, as it is of his class. We must say, moreover, that Dr. Byrne's action strikes us as open to criticism.—Eds.

SUFFOLK DISTRICT MEDICAL SOCIETY.—Annual election of officers: President, Henry W. Williams; Vice-President, Charles D. Homans; Secretary, A. L. Mason; Treasurer, A. B. Hall; Librarian, B. J. Jeffries; Commissioner of Trials, Charles W. Swan; District Nominating Committee, Charles E. Buckingham; Committee of Supervision, George H. Gay, Samuel A. Green; Committee on Social Meetings, Calvin Stevens, George W. Gay, H. I. Bowditch, J. P. Oliver; Censors, Thomas Waterman, J. C. Warren, Edward N. Whittier, G. G. Tarbell, A. M. Sumner; Councilors, S. L. Abbot, James Ayer, H. H. A. Beach, H. J. Bigelow, J. N. Borland, H. I. Bowditch, B. Brown, C. E. Buckingham, S. Cabot, P. M. Crane, D. W. Cheever, Hall Curtis, H. Derby, F. W. Draper, C. Ellis, G. H. Gay, S. A. Green, F. B. Greenough, A. B. Hall, G. Hay, D. H. Hayden, R. M. Hodges, C. D. Homans, John Homans, W. Ingalls, J. B. S. Jackson, J. F. Jarvis, B. J. Jeffries, G. H. Lyman, F. Minot, W. W. Morland, H. K. Oliver, John P. Reynolds, W. L. Richardson, G. C. Shattuck, A. D. Sinclair, D. H. Storer, C. W. Swan, J. B. Treadwell, J. E. Tyler, O. F. Wadsworth, C. E. Ware, James C. White, H. W. Williams.

At the annual meeting of the Connecticut Medical Society held in New Haven May 24th and 25th, Dr. A. W. Barrows, of Hartford, was elected President; Dr. R. Hubbard, of Bridgeport, Vice-President; Dr. F. D. Edgerton, of Middletown, Treasurer; Dr. C. W. Chamberlain, of Hartford, Secretary, to whom all communications intended for the society should be addressed.

At the annual meeting of the Essex North District Medical Society held in Haverhill on Wednesday, May 3, 1876, the following officers were elected for the ensuing year: President, F. A. Howe, of Newburyport; Vice-President, W. H. Kimball, of Andover; Secretary and Treasurer, George W. Snow, of Newburyport; Corresponding Secretary, John Crowell, of Haverhill; Librarian, S. K. Towle, of Haverhill; Commissioner on Trials, W. H. Kimball, of Andover; Councilors, William Cogswell of Bradford, R. B. Root of Georgetown, J. C. How of Haverhill, H. J. Cushing of West Amesbury, George W. Garland of Lawrence, David Dana of Lawrence, Charles P. Morrill of North Andover, John Crowell of Haverhill; Censors, S. K. Towle of Haverhill, E. P. Hurd of Newburyport, C. G. Carlton of Lawrence, Orin Warren of West Newbury, O. H. Johnson of Haverhill.

NEWBURYPORT, June 3, 1876.

GEORGE W. SNOW, *Secretary*.

BOOKS AND PAMPHLETS RECEIVED.—Health of Schools. Papers read before the American Social Science Association at Detroit, May, 1875.

Transactions of the Iowa State Medical Society for the Years 1872 to 1876 inclusive.

Seventh Annual Report of the State Board of Health of Massachusetts. 1876.

Thirteenth Annual Report of the New York Society for the Relief of the Ruptured and Crippled. May, 1876.

Report on Dermatology. By L. P. Yandell, Jr., M. D. (Reprinted from the American Practitioner.)

List of Skeletons and Crania in the Section of Comparative Anatomy of the United States Army Medical Museum at the International Exhibition.

International Exhibition. Hospital of Medical Department of United States Army Description of Models of Hospital Cars; of the Models of Hospitals; of the Models of Hospital Steam Vessels; of Perot & Co.'s Improved United States Army Medicine Wagon. (Four pamphlets.) Philadelphia. 1876.

The Warfare of Science. By Andrew Dickson White, President of Cornell University. New York: D. Appleton & Co. 1876. (From A. Williams & Co.)

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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TWO CASES OF PECULIAR MENTAL TROUBLE FOLLOWING THE PUERPERAL STATE.

BY ALLAN McLANE HAMILTON, M. D.,

Visiting Physician to the Epileptic and Paralytic Hospital, Blackwell's Island, New York.

I HAVE lately treated a number of cases of a class which I am sure is familiar to most medical men, especially to those who devote the greater part of their time to the study of nervous disease. I allude to certain ill-defined conditions that are connected with or follow the puerperal state. These cases do not come under the head of puerperal mania, which is a common and well-recognized form of insanity, but are difficult of description and classification, because of their irregularity. The patients I have seen have all been uræmic at some time during pregnancy, not to the extent which is accompanied by convulsions or other grave symptoms, but the blood-poisoning was much more extensive than it usually is. Barker has found that albuminuria is not the cause of puerperal mania, but when found is merely a coincidence. In the cases I allude to it was *always* present, and seemed to be the cause. I have seen the same symptoms expressed, though in a less marked degree, in patients who were suffering from chronic nephritis, and where the puerperal state had nothing to do with the history.

In the spring of 1875 Mrs. C. came to my office with her husband. I found her to be an amiable, well-educated woman of thirty-two years of age; her manner was cheery and agreeable, and there was no evidence of mental trouble. Three months before this she had been delivered of a child at full term, which was born dead. A week after, her milk "dried up." The last months of her pregnancy were attended by evidences of uræmia, marked anasarca, clouded urine excreted in small quantity, but no convulsions nor mania. Mrs. C.'s previous history was uneventful. There was absolutely no hereditary predisposition to insanity, and her mind was perfectly clear during pregnancy.

She was anæmic, and complained of dizziness, palpitation, gastric disturbance, vertical headache, loss of memory, ringing in the ears, etc. She passed her urine at the time of her visit in normal amounts, and it did not contain albumen. Her complexion was pale and her pupils

were dilated. A very slight blueness of the skin was apparent, but was confined to the hands. The lips had not lost their lines of expression, which is generally the case in melancholia, and they were not swollen. She was inclined to sleep. Considering that the symptoms indicated "cerebral anæmia" (a very unsatisfactory term), I began with iron, phosphorus, and other remedies of the same kind.

Two days after this visit she again appeared at my office, looking very much agitated, and saying she had come for "protection from herself." She had been tempted to get up from her bed and cut her throat with her husband's razors. She was perfectly cognizant of her condition, and was aware of the fearful nature of the act she was tempted to perform. After a talk of half an hour she left me, feeling settled, and without the desire. On another occasion she came to see me, as "she had the feeling again." She had taken her sister's baby in her lap, and while it was there she "suddenly felt like throwing it on the floor" with all her force. At another time she was prompted to run the blade of a pair of scissors into the fontanelle. These impulses would recur every week or so, when she always came to see me, and would sit a few minutes, talk upon other subjects, and arise to go, saying, "Now, doctor, the feeling has passed off." Not at this time, nor at any other, were there delusions of any kind. Under treatment she improved in general health, and her nervous symptoms disappeared.

Her last morbid impulse occurred during the fourth month after treatment. One evening with her husband and brother she went upon the house-top to see a fire. While there the old feeling returned, and she would have thrown herself from the roof, had she not been detained. This was the last and most serious expression of the disease. Since that time she has not had a return, and says she is perfectly well.

A second case I lately saw was attended by slight though perfectly defined mental changes. The patient was a young married woman of twenty-four years. For some time before parturition and during her pregnancy there was kidney trouble. Before her labor she was a loving and devoted wife, but shortly after lost all of her amiability, and treated her husband and mother with marked coolness, and sometimes with decided rudeness. A month after delivery she took a deep interest in religious matters, and really carried the observance of her religious duties to such a pass as to be disagreeable to all about her. She did eccentric things, such as getting up at night, going down to the piano in the drawing-room, and singing hymns. When reminded of the unseasonableness of the hour she would return to her bed, first shutting the hymn-book in a mechanical manner.

I saw her in this condition, and found a state closely bordering on melancholia, though there was no mental depression, no anxious facies, no sighing, nor hopelessness. A persistent use of agents which would

restore the action of the kidneys, combined with fresh air and a well-regulated diet, did her much good. After a few weeks the patient slept well, and the mental irritability gradually disappeared.

In both of these cases there were symptoms which were not those of insanity. In Case I. the patient was able to reason and had full consciousness of her infirmity, so that she had the power to seek the society of others when she felt the impulse. There was the absence of all physical signs of insanity, except the coloration of the skin. In the second case the short duration of the mental trouble and its subsidence with improvement of the kidney difficulty proved it to be a functional derangement.

Tuke has divided insanity of this kind into three varieties, namely, the insanity of pregnancy, puerperal insanity, and the insanity of lactation. The cases I have mentioned could be confounded only with the latter variety. It will be seen, however, that the insanity of lactation is always associated with the prolonged secretion of milk. In both of these cases the milk was suppressed.

RECOVERY FROM GUNSHOT WOUND OF THE LEFT KIDNEY.

BY A. R. CUMMINGS, M. D., CLAREMONT, N. H.

G. D., aged twenty-seven, a well-developed married man, a clerk in the Junction House in this place, had an altercation with one of the guests of the house February 6, 1876, at seven o'clock P. M. The assailant was standing some six feet in front and to the left of D. when he discharged his pistol. The ball, twenty-two hundredths of an inch in diameter, entered the left hypochondrium, passing through the costal cartilage of the ninth and tenth ribs, and was discovered by the writer in the lumbar muscles over the region of the left kidney, within half an inch of the spinous process of the first lumbar vertebra. About forty minutes after the patient received the shot, an incision three fourths of an inch in depth was made, and the ball removed without difficulty.

There was moderate hæmorrhage from both wounds. The patient was in a collapse; the pulse very feeble, 70 per minute. He was instructed to lie upon his back and the wounds were to remain open until the external hæmorrhage subsided. Cold-water dressing was applied to the abdomen, one fourth of a grain of morphia administered immediately, and the nurse requested to administer it often enough through the night to relieve pain. Dr. S. G. Jarvis arrived about twenty minutes after the writer left the patient, and remained through the night. I visited the patient on the 7th at six o'clock in the morning. Dr. Jarvis reported that the patient had vomited several times and

had had hæmaturia to the extent of one quart of blood. The hæmorrhage continued ten days in a smaller quantity from day to day. He had retention of urine after forty-eight hours, and the catheter had to be used for four days. Twelve hours after he received the wound, the opening in the hypochondriac region was closed with a piece of lint dipped in a solution of carbolic acid, and the one on the back was kept open to permit the escape of blood or urine. The patient then commenced taking half a grain of pulverized opium once in three hours, which was the only medicine prescribed for six days. Ice poultices were applied to the abdomen. On the sixth day the opium was omitted and on the seventh day he had a natural evacuation from the bowels. All the nourishment he took for six days was a tablespoonful of gruel occasionally, and for drink a small quantity of ice water. After his bowels moved, he took ten grains of gallic acid once in four hours, for twenty-four hours, then once in eight hours for forty-eight hours, for the hæmaturia, which seemed to be wholly arrested by it.

The fourth day his pulse was 92 per minute and his temperature 101°, but from this time they gradually subsided to a normal standard. The writer did not attempt to pass a probe into the abdominal cavity to explore the wound. The patient had not eaten since nine o'clock in the morning, ten hours previous to receiving the wound. He was very calm in reference to his condition, and has now fully recovered.¹

Druitt says in his *Surgery* that "wounds of the kidneys are attended with bloody urine."

The surgeon-general reports (Frank H. Hamilton in his *Surgery of Wounds of the Kidneys inflicted by Balls*) that "several cases are returned as probable recoveries; and cases are particularly mentioned as having been accompanied with hæmaturia, in which recovery took place; but in none of these cases does he consider the evidence that the ball penetrated the kidney as being unequivocal."²

"Guthrie saw a case which seemed to promise recovery; but Legouest reports the only well-authenticated case of complete cicatrization of a gunshot wound of the kidney, which happened to be verified by an autopsy, death being caused by a wound of the knee received at the same time as the wound of the kidney."

SENILE GANGRENE OF THE FOOT; RECOVERY WITHOUT AMPUTATION.

BY J. F. DYER, M. D., GLOUCESTER.

T. K., seventy-three years of age, had been since November, 1874, afflicted with gangrene of the great toe, which in a few weeks involved

¹ March 6, 1876.

² Circular No. 6, 1865, page 27.

the next toe. The pain was intense, the fetor disgusting, scarcely mitigated by the use of the most approved disinfectants. He requested amputation, but not feeling justified under the circumstances in performing that operation, I called in consultation Dr. H. E. Davidson of this city, who had seen the case once before with me, and who advised against it. The determination was strengthened by unfavorable results in other cases, in one of which, some twenty years since, we performed that operation.

Antiseptics were used, and occasionally cauterants, such as strong nitric acid; but permanganate of potash and a dressing of tar ointment were mostly depended on, with a generous diet, tonics, and opiates.

In May, 1875, the disease having extended to the ball of the foot, and the whole foot and lower half of leg having become swollen and painful, and the patient being nearly worn out with suffering, the metatarsal joint sloughed with the integument half-way to the next joint, and in a few days the stump became covered with healthy granulations, and for four months the surface presented the appearance of an indolent ulcer, healing gradually, and was nearly healed in September.

April, 1876. The foot has now entirely healed, and there has been no return of the disease. Mr. K. is in good health, and about his usual business.

RECENT PROGRESS IN SURGERY.

BY J. COLLINS WARREN, M. D.

Abdominal Section in Intussusception. — Three cases of intussusception in which abdominal section was performed are reported at the meeting of the Royal Medical and Surgical Society.¹ The first case is reported by Mr. Howard Marsh. An infant seven months old was attacked with symptoms of dysenteric diarrhœa-sickness, griping abdominal pains, and too frequent action of the bowels. For a time relieved by medicines, the condition recurred on the third day and was then accompanied with tenesmus and the passage of blood and slimy mucus. On the thirteenth day a decided change for the worse took place. The bowel was found projecting two inches beyond the anus, and the ileo-cæcal valve could be seen at the extremity of the protrusion, while in the abdomen a firm cylindrical tumor was felt in the course of the descending colon. At the time of the operation the child was in a condition of collapse. The abdomen was opened to the extent of two inches in the middle line just below the umbilicus. Great care was required to avoid injuring the intestine, which protruded into the wound. The intussusception could not be reduced until the bowel was drawn out through the incision, but then it was easily reduced. No bad

¹ The British Medical Journal, January 1, 1876.

symptoms followed, and the child was convalescent on the fourth day. The intestine appeared to have been invaginated for thirteen days, and inflammation had set in only fourteen hours before the operation. Insufflation and distention of the bowel with lukewarm water had been tried previous to the operation. Mr. Marsh is of the opinion that if all other means fail, the operation should be performed (1) in acute cases of not more than twelve or eighteen hours' duration; (2) in chronic cases in which there have been no symptoms of inflammation or strangulation of the intestine.

A second case was operated upon by Mr. Henry G. House. The patient, thirty-three years of age, had had symptoms for twenty-three days, at the end of which time a tumor was observed in the right iliac fossa, but which afterwards moved over to the left iliac fossa. Inflation of the intestine was tried on three occasions, without success. A vertical incision was made opposite the umbilicus. The operator not being able to reduce the intussusception *in situ*, the bowel was drawn out of the wound and reduction was effected with difficulty by a kneading movement and pressure upon the distal end. Antiseptic treatment was used, and the patient recovered without a bad symptom. There was no hæmorrhage from the bowels in this case, hitherto considered a cardinal symptom of the disease. The symptom did not indicate the commencement of the processes which lead to sloughing and detachment of the invaginated portion, it was often evidence however of extreme swelling and congestion of the part, a condition which might destroy the patient's life in a few days or render the operation a failure by making it impossible to reduce the intussusception when the abdominal cavity was opened.

Mr. Hutchinson reported a third case in an infant six months old. There had been the usual symptoms and the usual treatment. It was found easier in this case to reduce the intussusception by drawing down the lower portion of the bowel instead of withdrawing the intussuscepted portion out of its sheath. The intussusception had evidently begun at the cæcum. Considerable difficulty was found, as in the other cases, in returning the intestines into the abdomen. Death occurred six hours after the operation, and at the post-mortem examination evidence of recent peritonitis was found. In connection with the fact that the child's sister had died at the same age a year before, with similar symptoms, it was of interest to note that the cæcum appeared quite loose, possessing a mesentery which allowed it very free displacement, a condition which gave a possible explanation of the trouble.

In the discussion which followed, Dr. Brinton stated that in six hundred cases of intestinal obstruction, forty-three per cent. were due to intussusception; and he thought that thirty or forty per cent. of the cases of intussusception terminated favorably. Mr. Maunder mentioned two cases of intussusception, one being in a child in whom injection of air

and water having failed, the reduction was effected by the finger and an elastic catheter. The other case was that of a child two years old. The intestine protruded at the anus measured six or seven inches. Reduction occurred spontaneously the next day. Mr. Pollock stated that he had made some experiments on the capability of the intestines to bear injection, and had found a great tendency to rupture of the peritoneum without the bowel giving way. This afforded an explanation of fatal peritonitis in cases of intestinal obstruction.

A writer in *The Doctor*¹ mentions a case of abdominal section on a boy sixteen months old for intussusception, ending fatally. Mr. Warren Fay has treated cases by injecting water or air while the child is held up by the heels. M. Ortille, of Lille, reports in the *Abeille Médicale* two cases of intussusception cured by swallowing shot mixed with oil. M. Medien had previously reported cases treated successfully in the same way. Dr. Ross gives two cases in the *Canadian Journal of Medical Science*, treated by inversion combined with the use of quicksilver. Both children were eighteen months old. In the first case five ounces of metallic mercury were injected into the rectum, the assistant being directed to shake the patient up and down for ten minutes; the body was gradually brought to the horizontal position, and at the end of twenty minutes relief was manifest. When the patient was in the erect position again, the mercury escaped into a basin. Both cases were cured.

Dr. Ashurst has collected thirteen cases in which abdominal section has been performed for the relief of intussusception, five of the cases being successful. A writer in *The Lancet*² quotes eighteen cases with eight recoveries. He is of the opinion that the operation should be performed at once, if a moderate trial of the ordinary measures fail to reduce the invagination after the hæmorrhage has unequivocally declared itself. If deferred beyond this, there is great risk of the introverted portion of the bowel becoming so swollen and tense that it cannot be withdrawn; or adhesion between the two surfaces may intervene. All measures should be adopted early. "Everything should be done, by quieting the action of the bowels, by attending to position, and by employing manipulations, inflations, or cold injections, and cold external applications, to reduce the invaginated portion before it has been enlarged and swollen by the accumulation of blood and serous effusion as a result of constriction. If the symptoms still persist, there is, judging from the evidence before us, a good prospect of reducing the intussusception and saving the patient's life by means of abdominal section, provided that the walls of the bowel or the peritoneal covering be not inflamed or adherent. That death may and often does take place without the supervention of inflammation or strangulation has been abun-

¹ *The Doctor*, February 1, 1876.

² *The Lancet*, January 1, 1876.

dantly shown by the records of many post-mortem examinations, and for such cases it may be stated with confidence that abdominal section will be found a valuable and comparatively safe procedure. It is scarcely necessary to say that in all cases the signs of intussusception should be unequivocal before so serious an operation as abdominal section be undertaken."

Cirroid Aneurism of the Head. — Dr. Wernher¹ reports two cases of angioma, with remarks upon their pathology and treatment. The first case was that of a young woman aged twenty-three years, the tumor being situated on the left side of her forehead, midway between the hair and the eyebrow. Its base was broad and invaded the subcutaneous cellular tissue; the skin over it was thin and red, and cicatrized from previous cauterization. The whole mass pulsated at all points with considerable force, the pulsations being synchronous with those of the heart. In the neighborhood, on the forehead and temples, were several large pulsating vessels, about the size of the temporal artery. In the right temple there was quite a large coil of them, which pulsated vigorously. They were all very superficial and prominent. The patient was born with a nævus on the spot occupied by the tumor. The mass was excised, two long needles having been thrust under its base to control the hæmorrhage, which was arterial and very abundant. The large number of the adjacent vessels made the success of excision appear doubtful, inasmuch as they seemed to be branches of the temporal and facial arteries, whose blood, derived from the heart, would continue to circulate as freely as before. It was found, however, that these vessels ceased to beat the moment that the tumor was removed, and soon collapsed, the next day no trace of them being discovered. On microscopic examination the excised mass was found to consist of a sac communicating with a large artery and dividing into numerous pouches, which were separated from each other by thin membranous ridges. The walls of the sac were thin, with a smooth surface, and contained muscular fibres which ran in various directions. From some of the pouches, vessels were given off, which appeared to be venous in character. The angioma appeared to represent the arterial capillary system, but communicated directly with small veins, and might be considered therefore as a species of varicose aneurism.

The second case was that of a man forty years of age, who two years before had cut himself on the border of the right lower jaw with a hatchet. The wound healed readily under adhesive plaster, but two weeks later a small tumor began to form under the cicatrix. There was at the time he was first seen a subcutaneous tumor about the size of a bullet at this point, the skin being freely movable over it. It appeared to consist of a coil of distended and pulsating vessels, from which

¹ Berliner klinische Wochenschrift, March 27, 1876.

a number of large branches were given off, running in the direction of the nose, eye, and forehead, and extending up into the scalp. The labial and transverse facial arteries were not enlarged. The branches seemed rather to correspond to the facial and temporal veins. There was a distinct aneurismal whir in the central tumor. In the branches the force of the pulsations diminished in proportion to the distance from the central coil, and if the branches were compressed they ceased to pulsate on the side removed from the tumor. The diagnosis was aneurism by anastomosis. Large needles were inserted beneath the tumor, and ligatures were twisted over them. The pulsations ceased not only in the tumor but in all the radiating vessels.

In both these there was a central pulsating mass surrounded by a circle of radiating vessels beating strongly, but ceasing to do so the moment communication with the tumor was cut off. These vessels contained arterial blood. The character of the tumors was practically identical, although their origin was different, and yet one was a cirroid aneurism and the other an aneurism by anastomosis, ordinarily considered two different diseases, the first being caused by a disease of the wall of the vessel and the second arising from a traumatic communication of a vein with an artery. The similarity of the two tumors is shown by the fact that in both cases the radiating vessels were venous and not arterial, obtaining their blood from the tumors and not from the arteries in the neighborhood.

The development of cirroid aneurism from a nævus or telangiectasis could take place only by a disappearance of the intermediate capillary system which separates arteries from veins. The examination of the mass removed in the first case showed that this change had taken place. A large artery communicated directly through a blood sac with numerous large veins. The stagnation of the blood current caused by an extensive dilatation of the capillaries would, if allowed to remain undisturbed for a long period, as in the present instance, distend these vessels into a cavernous structure, and also act upon the afferent arteries in a manner similar to that of a ligature of a large vessel upon the collateral arteries. The fact that nearly all cirroid aneurisms are to be found upon the head is not accounted for by a predisposition of the arteries of this portion of the body to disease, as supposed by Bruns, but may be explained in most cases in one of two ways. A portion of these cases are congenital, arising from nævi which occur chiefly in the region of the head. Others are of traumatic origin, giving rise to a communication between vessels of both systems, and hence to aneurism by anastomosis. It is evident, therefore, that the central tumor is the part to be operated upon directly, and not the surrounding vessels, which, owing to their venous character, would be unable to reproduce the disease when once the central mass has been destroyed.

We may mention here that Dr. Bigelow¹ has lately employed with success the treatment of erectile tumors by central cauterization with a saturated solution of nitrate of silver. Two cases of a formidable nature were easily obliterated by the injection of a few drops of the solution with a subcutaneous syringe. If the tissues are firmly compressed about the orifice of the tube, after its introduction, an eschar of the solid tissues is produced, soon enveloped by coagulum adherent from inflammation with general blood-stasis in the neighborhood. The ultimate result is abscess and solid cicatrization. The first case was one of a large and pendulous under lip, which was so solidified by a number of simultaneous injections that a V-shaped portion was finally removed from it. The second was one of cirroid aneurism in the cavity of the orbit, which could not have been treated effectually by ligature without sacrificing the eye. In both cases the result was most satisfactory.

NAQUET'S LEGAL CHEMISTRY.²

THIS little book on legal chemistry includes the methods to be pursued in searching for poisons, in determining the nature and color of the hair and beard, in examining fire-arms with a view to determine how recently the powder has been exploded, in detecting human remains in ashes, alteration of writings, falsification of coins and alloys, adulterations in alimentary and pharmaceutical substances, and in examining stains produced by blood and the seminal fluid. In a work so small a complete treatise upon all of these different subjects could not be expected, but we did not expect to find quite such a lack of detail as exists throughout the book in describing the various chemical processes. This defect is very mildly expressed by Dr. Chandler in his "Preface" in the following language: "While it is to be regretted that the author has not presented a much more complete work, there is an advantage in the compact form of this treatise which compensates, in some degree, for its brevity."

In that portion of the work which treats of the detection of poisons, and which occupies nearly two thirds of the entire text, almost all of the processes for getting rid of the organic matter are briefly described. They are all, however, greatly wanting in detail, so that, although the book is valuable as a book of reference for the expert toxicologist, it is an extremely dangerous one to place in the hands of one not experienced in this branch of chemistry. Thus no information is given enabling one to know when the organic matter is sufficiently destroyed by the use of Fresenius and Babo's method, and no apparatus is described to prevent partial loss of the volatile metallic salts when sulphuric acid is employed. In fact, the special precautions necessary in per-

¹ The JOURNAL, January 6, 1876.

² *A Guide to the Detection of Poisons, Examination of Stains, etc., etc., as applied to Chemical Jurisprudence.* Translated, with Additions, from the French of A. NAQUET by J. P. BATTERSHALL, Nat. Sc. D., with a Preface by C. F. CHANDLER, Ph. D., M. D., LL. D. New York: D. Van Nostrand.

forming most of these important analyses to guard against loss and secure the utmost thoroughness are rarely mentioned.

We are much surprised, also, to notice the entire omission of one of the more recent processes for the isolation and detection of alkaloids, one which has in the writer's hands proved to be the most delicate, as it is the most systematic, method for separating alkaloids from animal fluids and tissues, namely, Dragendorff's process as given in his work entitled *Ermittelung der Gifte*, which has been translated into French, and was, therefore, readily accessible to the author.

In reference to special tests for the poisons, we notice that one of the most important tests for arsenic (Reinsch's) was supplied by the translator in a footnote, it having been omitted in the original. Nothing whatever is said concerning the detection of chloroform, chloral hydrate, alcohol, or ether in cases of death resulting from these compounds. There are, too, but one or two tests given for the recognition of the various alkaloids, with the exception of morphia, the reactions of these organic bodies, which have been quite extensively studied of late years, being entirely ignored.

In other portions of the book, also, there does not seem to be that care exercised which is necessary in order to secure strict accuracy, many statements being made which are not literally true. Thus in the article upon hair, it is said that the hair of a horse *never* exceeds twelve millimetres in length; that human hairs have the same diameter throughout their entire length, and that the hair of a blonde girl is six one hundredths of a millimetre in diameter, all of which statements have very many exceptions. It is strict accuracy which is desired in any work upon medical or chemical jurisprudence.

The translator has added very greatly to the value of the book by his copious foot-notes and his most excellent list of the literature upon the various branches of chemistry treated.

The experienced toxicologist and chemist, who can supply the deficiencies of detail and make allowances for slight inaccuracies, will find this an excellent little work for reference on account of the large list of processes given, the variety of subjects treated, and the excellent appendix. E. S. W.



HOLMES'S PRINCIPLES AND PRACTICE OF SURGERY.¹

THIS work, prepared by the editor of the *System of Surgery* so well known to our readers, is intended by the author to be to some extent an introduction to the latter book, the treatises in which have been freely used. As the result of this undertaking we have, therefore, a *résumé* of the science and art of surgery as reflected by the ablest English surgeons. British surgery is, however, not solely represented, for the writer has endeavored to include the views, as largely as possible, of American and Continental surgeons; and we may say that the work of our own countrymen has received a very fair amount of atten-

¹ *A Treatise on Surgery, Its Principles and Practice.* By T. HOLMES, M. A. Cantab. With four hundred and eleven Illustrations, chiefly by DR. WESTMACOTT. Philadelphia: Henry C. Lea. 1876.

tion. This text-book bears favorable comparison with the large number of surgical works of the kind which attempt to cover within the brief space of one volume an extensive and rapidly widening domain in modern medicine. Mr. Holmes has not attempted to curtail this field, but on the contrary expresses righteous indignation at the custom which, under the name of specialism, would withdraw from the prescribed studies of the practitioner many diseases he should continue to be familiar with. We accordingly find that diseases of the eye, ear, and skin find their places in this book. It would appear difficult to introduce any striking novelties in the method of handling such a task, and yet Mr. Holmes's treatise bears the mark of individuality which distinguishes it from the practical and personal characteristics of Bryant and from the somewhat dry but useful compilation of Druitt. The rich lore of the System of Surgery has been condensed into a size which renders it available for the busiest practitioners, while a practical bearing has been given to the whole by a free use of the store of material at the disposal of a surgeon to a great London hospital. There is more system in the general arrangement of the work than we find in Bryant's book, although the latter possesses certain features which are decidedly preferable, such as the treatment of the subject of fractures in a chapter by itself.

It is easy to criticise the individual portions of a work when the author has been obliged to confine himself to narrow limits. The separate subjects appear to be prepared with care, and are everywhere marked by a due regard to the latest improvements in the science and art of surgery. This feature, indeed, constitutes the chief value of the book. We cannot refrain, however, from taking this opportunity to protest against the primitive manner in which writers of English surgical text-books are content to handle the pathological portion of their work, more particularly the subject of tumors, which might easily be dragged from the obscurity and confusion which now envelops it by making proper selections from the recent works of Continental writers. We fear the specialists would scarcely be satisfied with the attention which has been bestowed upon their department.

Mr. Holmes has departed somewhat from the beaten track in illustrating his work, and we welcome with much satisfaction an entirely new series of wood-cuts which, although varying greatly in excellence, have the merit of presenting old friends in a new dress, and frequently display considerable originality.

INSANITY IN ITS MEDICO-LEGAL RELATIONS.¹

THIS *brochure*, though published in Philadelphia, was written at Nebraska City. It seems to be largely a compilation from standard authors, but is too much abbreviated for use as a text-book. Its subject removes it in a great measure from the field of popular instruction. Its best mission would seem to be to that class of general practitioners who wish to know something of the questions on which it treats, but have no time or scanty means to make use of

¹ *Insanity in its Medico-Legal Relations.* By A. C. COWPERTHWAIT, A. M., M. D. Philadelphia: J. M. Stoddart & Co. 1876.

the larger treatises of Ray, Balfour Brown, and others. As its contents have been presented to the readers of the JOURNAL in various ways from time to time, no analysis of it will be attempted here.

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION AT PHILADELPHIA.

FIRST DAY, JUNE 6TH. — Dr. Wm. K. Bowling introduced the president, Dr. Sims, who in turn introduced Dr. Pepper, who made the delegates welcome to Philadelphia.

On the conclusion of Dr. Pepper's address, the secretary was asked to call the roll, but previous to this Dr. Pepper moved that the following distinguished gentlemen be asked to take seats on the platform: Surgeon-General William Roth, twelfth corps (Royal Saxon) German army, and staff, namely, Assistant Surgeon Hans Heymann, twelfth corps (Royal Saxon) German army, Dr. Max Brille, Dresden, Germany. (The address of these gentlemen is at Dr. Keyser's, No. 1630 Arch Street.) Members by invitation, Dr. Wywoodzoff, of St. Petersburg, of the Russian Commission, Le Docteur Gaffray, representative of the Paris press to the Exposition, Surgeon-General J. K. Barnes, United States army.

The secretary then stated that as the roll at the present time amounts to upwards of five hundred names, he moved that the calling of the roll be dispensed with. After some discussion this was agreed to.

The president then delivered his address, in which he traced the progress of the society, and committed himself in favor of receiving women as delegates. He then spoke in terms of eulogy of the late vice-president, Dr. J. B. Jackson, of Kentucky (who died shortly after his election in May last), after which he entered upon the discussion of the various forms of medical education in this country, and the code of ethics obtaining among physicians here; the speaker was of the opinion that this code was not up to the standard of professional honor, and at the same time that it hampered the profession at large in many ways which should be perfectly free. The present code of ethics is violated every day, not only by the rank and file, but by those high in authority. This is the first time that the validity, the constitutionality, of the code has been questioned, but it is not questioned that a committee should be appointed to investigate it. Let the code stand as it is; honorable men do not need it to influence their actions; dishonorable men will not regard it or any other. The speaker then entered on the chief topic of his address, the spread and prevention of syphilis. The former point was made clear by numerous "wise saws and modern instances," and in regard to the latter he advocated giving absolute and arbitrary power to boards of health, as in the case of contagious and infectious diseases. The president paid a handsome tribute to Professor Gross, whose boldness and outspokenness on this subject were deserving of all honor. Some startling statistics regarding prostitution on the Pacific coast were given, and the speaker concluded his remarks on this subject by declaring that never must the evil be fought by licensing prostitution, as obtains in Europe.

In conclusion Dr. Sims said, "In this our centennial year let us do away with all sectional feelings, to have nothing to do with any outside issues, to confine ourselves to the strict business of the association."

After a rather lively discussion on the motion of Dr. Toner to adjourn till reports of committees had been made and referred, the association adjourned till the afternoon, when the first meetings of the sections were held.

The section on obstetrics discussed the treatment of the pedicle in ovariectomy.

In the section on practice of medicine the paper was on the use of extract of malt in phthisis, read by Dr. Frank Davis, Chicago; Drs. Squibb, Toner, Palmer, and others taking part.

In the section on surgery Dr. Sayre read a paper on the treatment of Pott's disease by plaster dressing, which produced an interesting discussion.

WEDNESDAY, SECOND DAY. — The association met promptly this morning, Dr. Sims in the chair.

The following committee on nominations was appointed: Alabama, E. B. Sulze; Arkansas, George T. Hood; California, W. Baker; Connecticut, A. Woodward; Delaware, W. Marshall; District of Columbia, J. Elliott; Florida, G. W. Betton; Georgia, J. P. Logan; Indiana, L. Humphrey; Illinois, T. D. Washburne; Iowa, W. Watson; Kentucky, H. M. Skillman; Kansas, C. V. Mattson; Michigan, A. S. Heaton; Massachusetts, A. B. Hall; Minnesota, E. C. Cross; Maryland, Thomas F. Latimer; Maine, A. B. Snow; Missouri, John T. Hodgen; Mississippi, William Campton; New Hampshire, J. L. Swett; New York, N. C. Husted; New Jersey, S. Lilly; North Carolina, E. Grissom; Ohio, W. J. Scott; Pennsylvania, Traill Green; Rhode Island, L. C. Butler; South Carolina, James McIntosh; Tennessee, John H. Callender; Texas, E. Darnell; Vermont, W. D. Holton; Virginia, J. S. Wellford; West Virginia, J. C. Hupp; Wisconsin, H. P. Strong; United States Army, J. R. Smith; United States Navy, A. L. Gihon.

The judicial council reported that they had decided that the delegates from the Arkansas State Medical Society were entitled to seats on the floor.

Dr. R. C. Kedzil, of Lansing, Michigan, then read a paper on Natural Purifiers. In his argument he contended that water and air held the first place, and there is but one purifier, which is oxygen. Water can contain two classes of poisons: First, fixed poisons, such as strychnine and arsenic; second, a germinal class of poison. To dilute the water will not proportionately diminish the danger from this class of poison. In conclusion the gentleman offered the following resolutions, which were adopted:—

Resolved, That it is the first duty of States and municipalities — first in importance and first in the order of time — to make a sanitary survey of the water-supply, to preserve it against all unnecessary and avoidable contamination.

Resolved, That no municipality should introduce a water-system without at the same time providing a corresponding and extensive sewer-system.

Drs. Wilhelm Hirth and H. G. Holst, Medical Directors, Kristiana, were made members by invitation.

Dr. A. Garcelon, of Maine, then read a paper on Surgery, which, on motion, was referred to the committee on publication.

Medical Records. — Dr. Edward Seguin made the following report, with a resolution attached, which was adopted, in the name of a previous committee :

Since several years, the American Medical Association has given its support to a measure of great interest for those who have at heart the advance of physic, namely : —

The establishment of uniform means of observation, and of medical records, for the physicians of all countries.

This action of the American Medical Association has been expressed by the adoption of successive resolutions, and by the sending of delegates charged with the mission of advocating this reform : —

In 1873, to the British Medical Association, meeting in London ; and to the French Association for the Advancement of the Sciences, meeting at Lyons.

In 1874, to the British Medical Association, meeting at Norwich ; and to the French Association for the Advancement of the Sciences, meeting at Lille.

In 1875, to the International Medical Congress, meeting at Bruxelles.

In 1876 (next September), the same congress will meet in this very place ; and now the American Medical Association is called to decide what position it will assume in this matter. Will it recede from its former position, and leave the task to second-hand promoters, or will it continue its initiative before the international council ?

This is not only a question of pride for the association ; it is, too, one of justice due to the American physicians at large. If the constitution and by-laws of this association prescribe an annual transfer of its meetings from one part to another of this vast country, it is to give us opportunities to study and express the wants of the whole profession. Of these wants none has been found more deeply felt than the one of partaking, as givers and receivers, in the discoveries of our art. But this want is not ours alone, it is universal ; and the American Medical Association will deserve the thanks of all for having planned and carried into execution the most important instrument of the internationalization of medical progress.

Therefore the association resolves to charge its delegates of former years to continue to advocate the uniformity of means of observation before the various medical societies, and particularly at the next International Medical Congress, and report next year what success they will have met.

Drs. Seguin and Bowditch were appointed additional delegates to the International Congress.

The report of the treasurer was read, which shows that there is an unexpended balance of \$4577.07 in his hands to date.

The report of the committee of publication states that of the volume of the Transactions for 1875, nine hundred and fifty copies were printed at an aggregate expense of \$2000. Of these, eight hundred and eighty-three copies have been distributed to members, and twenty-eight to medical journals and societies, leaving thirty-nine on hand.

The report of the librarian states that during the past year there have been added to the library one hundred and twenty-four distinct titles, exclusive of yearly volumes of transactions of societies, reports of hospitals and boards of health, and volumes of medical journals, where these have been previously

catalogued as distinct titles. This addition makes the library consist at present of six hundred and thirty distinct titles, which comprehend one thousand five hundred and fourteen volumes, including pamphlets.

The report of Dr. C. Howard, delegate to the Brussels International Medical Congress, held in September last, was presented, and referred to the committee on publication.

A sketch prepared by Professor Hailes, of the life of Dr. Armsby, of Albany, New York, was, on motion, referred to the committee on publication. Adjourned.

In the afternoon, at the meeting of the section on medical jurisprudence, Dr. Woodward's paper on differential diagnosis of blood-corpuscles was thoroughly interesting. He described his method of measuring corpuscles, showing the inaccuracies which are common in measurements made by experts. He expressed the hope that hereafter all experts in courts of justice would be called upon to corroborate their evidence by photographs of the blood corpuscles they had examined in a given case of blood-stains. He asserted that there has been great extravagance in experts who claim to be able to distinguish corpuscles of blood of different animals, because in every drop of blood there are corpuscles of different sizes, and because corpuscles differ in size in blood taken from different portions of the same animal.

This difference makes the corpuscles of man and dog overlap each other. That is, the smallest corpuscles in man are larger than the smallest in the dog, and the largest in the dog larger than the largest in man. He then gave the minimum, mean, and maximum measurements, in millionths, of corpuscles of man, dog, and guinea pig, showing how in the varying sizes of each they resembled and could not certainly be distinguished from each other. He illustrated by photographs of great beauty, in some of which the naked-eye size of the corpuscles was an inch and a half in diameter. He showed photographs of human blood in which corpuscles measured nineteen millionths more than the corpuscles of the dog; another in which dog's blood-corpuscles measured thirteen millionths more than human blood-corpuscles. He was very severe on attempts to distinguish corpuscles of sheep, cat, and ox from human corpuscles, and said nothing could make him swear away human life by any difference he might detect in the size of corpuscles taken from *dried* blood-stains from the average size of man's corpuscles. When closely questioned as to whether he could not distinguish a difference between the size of human blood corpuscles and that of corpuscles of sheep, cat, or ox, he said, as a question between medical men, or even in court, he would swear that certain corpuscles were or were not human; but not if his decision involved human life, because the effect of drying and reagents upon the size of blood corpuscles changed them to such an extent that he could not or would not swear to the kind of corpuscle, if it involved the life of a human being.

In a discussion between himself and Dr. J. G. Richardson, Dr. Woodward conceded that if a stain had corpuscles larger than three hundred or two hundred and ninety millionths of an inch in diameter, he would not then swear they were either dog's or human.

Dr. Richardson said that if a criminal claimed that blood on his clothing

were that of ox, pig, or cat, he (Richardson) at once attempted to prove the fact, and claimed he could distinguish the corpuscles of such animals from those of man; but if the prisoner asserted that the stains were caused by dog's blood, he never attempted to prove the stain human blood.

Dr. Woodward closed by asserting that he never under any circumstances would swear that blood-stains were human, if life were involved, and he thought the time had come when authority should put forth its hand and say to experts in blood-stains, Halt!

The section on obstetrics gave most of their time to the consideration of a new galvano-caustic battery of wonderful power and unusually convenient size, manufactured by W. G. Creamer, Brooklyn, N. Y.

The section on state medicine and hygiene listened to the reading of a bill to be sent to Congress, and drawn up by Dr. Baker, of Lansing, Mich., proposing the establishment of a national board of health. A paper on Social Aspects of the Alcohol Question was read by Dr. May. Another on Climatology of Minnesota in Relation to Pulmonary Diseases was read by Dr. Staples. A resolution proposing the erection of state inebriate asylums was offered, and accepted by unanimous vote.

In the section on practice of medicine, materia medica, and physiology, Dr. Buck, of New York, read a paper on the Use of Arsenic in Skin Diseases. His doses were discussed, and were not approved. As an example, he gives liquor potassæ arsenitis in twenty-drop doses three times a day to a child three years old. There was also an interesting discussion on whooping-cough.

In the section on surgery Dr. Adinell Hewson read a paper on Pirigoff's Amputation. There was a warm discussion on the treatment of fractures, Dr. Sayre advocating plaster dressing and non-interference, while the majority preferred the older methods. A hot, noisy altercation took place between Dr. Sayre and Dr. Martin, of Boston Highlands, in relation to the treatment of fracture of the lower end of the radius.

THURSDAY, THIRD DAY. — At 9.30 precisely the meeting was called to order by Dr. J. Marion Sims, the president of the society.

On motion the resolution of yesterday that all persons whose names are at present on the roll shall be considered members was reconsidered, and it was voted, after some discussion, that the roll of members, amounting to some seven hundred and thirty names, be called. In accordance with this resolution the secretary, Mr. Atkinson, began reading the roll, and continued reading until ten o'clock, when, the hour having arrived for the reading of the paper on Obstetrics, by Dr. S. C. Busey, of Washington, D. C., the reading of the roll was discontinued, and the doctor was introduced by the president.

The address was well written and well read. The orator began by saying that his paper was simply a *résumé* of what has and has not been done in gynæcology during the past year.

The multitude of expedients and remedies in this specialty remind one of the many heads of grain in a sheaf of wheat, — some heavy, rich, full; others abortions, empty, germless. He next made allusion to the decided advance made by Dr. Goodell in the manipulation of "head-last" presentations.

In regard to the forceps, he said it had been found that traction is the

proper mode of using them, and that the pendulum movement should be discarded.

He then spoke of the sericeps, a kind of bag for "head-last" presentations, described, apparently independently, by a Frenchman and an American in similar language, although the probability is that the French inventor had never heard of the prior invention by an American.

He next referred to perchloride of iron in post-partum hæmorrhage, but felt that the contractions of the womb were really the only perfectly safe means of arresting the hæmorrhage.

He alluded to transfusion, in doing which he asserted that the rise of temperature during the operation has not yet been explained. If there be fever at all, it occurs within three hours after the operation. The rise in temperature may be a neurotic element, as suggested by Wood, although he was not ready to accept this hypothesis.

The largest percentage of success was in cases in which temperature descended soon after transfusion.

In puerperal medication steady progress has been made. The puerperal convalescent is no longer starved, nor forbidden the sun, nor kept weeks in moveless attitudes.

Puerperal fever, Duncan has concluded, is absolutely free from epidemic effects like those of scarlet fever. Lesions in continuity of inner surface of the womb are now considered foci of the puerperal fever. It is not a result of unknown blood changes. Thrombosis of lymphatics (as suggested by Virchow) considered as having an influence in causing puerperal fever. Physiological or chemical changes in the lymph are the probable cause of its coagulation. Thrombosis in lymphatics, according to Virchow, is met with only in the graver forms of puerperal fever. Septic matter probably enters the lymphatics by means of open spaces in the inner surface of the uterus.

Diseased lymphatics have been traced to the broad ligament.

The pathology of puerperal eclampsia is more confounded than were the tongues at the Tower of Babel. A large percentage of cases are associated with albuminuria and kidney affections. Puerperal eclampsia has of late been studied in its relation to temperature. Bourneville's tables of temperature show that no death occurs when it is below 104° , no recovery when it is higher than 106° . This suggests treatment bearing on moderation of temperature. Venesection is an exploded and discarded treatment. Chloroform narcosis lessens temperature. So does chloral.

He next referred to the effects of veratrum viride, digitalis, and aconite.

During the past year not a single disputed question has been settled in gynecology. He alluded to the discussions on the nature of menstruation, and finally touched upon uterine fibroids, saying that one year ago ergot seemed firmly established in the treatment of these bodies.

A large number of cases are now rescued from a class heretofore considered incurable.

After the conclusion of the address an effort was again made to do away with the reading of the roll, but unsuccessfully. The motion occasioned considerable discussion.

On the reading of the roll, at the name of a delegate from the State Society of Michigan the delegate was objected to, as coming from a society against which charges were pending. At this junction the report of the judicial council, signed by Dr. Bennan, chairman, recommending that the delegates from the Michigan State Society be received, was presented. The report was applauded, and the reading of the roll was continued.

On the reading of the name of Sarah Hackett Stevens, representing the Illinois State Society, Dr. Brodie, of Detroit, moved that that and all such names be referred to the judicial council. A motion that this resolution be laid upon the table was carried by a large vote, amid considerable applause.

Dr. Toner, of Washington, moved that the roll as read be confirmed, with the exception of the objections taken.

A resolution providing that it was not derogatory in any physician to take out a patent for a surgical instrument of any kind was referred to the judicial council.

Dr. Keller, of Kentucky, on behalf of the trustees of the fund for a monument to the late Dr. McDowell, of Kentucky, reported a recommendation for an increase of one dollar each year in membership dues, the amount thus raised to go to said fund.

It appears that the entire fund is only \$494, of which \$400 were subscribed by four individuals.

Objections were raised, and a motion to lay the resolution on the table was agreed to.

Dr. Toner moved that \$1000 be appropriated out of the funds of the association for the McDowell fund.

Dr. Howard moved the point of order that it was a rule of the association that no new business should be transacted except on the first and fourth days of the session of the association, and hoped the rules would not be departed from. The chair decided the point well taken, and the motion of Dr. Toner was declared out of order.

Dr. Sims said he was as anxious as any one to secure the money asked for, but after conversation with gentlemen around him he was satisfied that the subject could not be discussed to-day. The association would have to defer action until to-morrow.

Dr. Henry A. Martin, of Boston, offered a resolution that the subject of bovine or animal vaccination is an important one as compared with the usual arm-to-arm practice, and that a committee be appointed to report upon the subject at the next meeting of the association. Agreed to.

The meeting then adjourned.

In the afternoon the sections met. The section on obstetrics discussed the treatment of puerperal hæmorrhage.

The section on practical medicine, etc., discussed a paper by Dr. Rogers on cholera.

Section on state medicine and hygiene discussed the presentation of a bill to Congress recommending the establishment of a national board of health. A paper on the Water Supply of Arkansas was accepted. A paper on The Experiences of a Sanitarian was read by Dr. Benj. Lee, of Philadelphia.

In the section on surgery Dr. Sayre suspended a child by the head and straps passed under the axillæ, and applied the plaster dressing for Pott's disease. Before the application the child could not stand upright. Subsequently he walked erect with ease. The suspension of the body established an extension which separated the vertebral bodies. Then followed a discussion on the surgical treatment of uterine fibroids.

FRIDAY, FOURTH DAY. — Dr. Toner, of Washington, offered the following resolution, which was adopted unanimously: —

Resolved, That the members of the medical profession who in any way aid or abet the graduation of medical students in irregular or exclusive systems of medicine are deemed thereby to violate the spirit of the ethics of the American Medical Association.

The secretary, Dr. Atkinson, presented a report which states that in obedience to the resolution adopted at the session of 1875, and in reply to his inquiries, he is informed boards of health exist in Alabama, California, Georgia, Massachusetts, Michigan, Minnesota, Virginia, and Wisconsin. He had written to the governors of Delaware, Indiana, Iowa, Nebraska, New Jersey, New York, South Carolina, Texas, and Vermont, with almost negative results.

Dr. H. C. Wood, of Philadelphia, offered the following, which was adopted:

Resolved, That a committee of three be appointed by the chair to obtain from Congress an appropriation for the publication of the subject catalogue of the National Library, and that the state societies are requested to take such action as may be deemed fit to further said object.

The committee on nominations presented their report, which was adopted: For President, Dr. Henry I. Bowditch, of Massachusetts. Vice-Presidents, Dr. N. J. Pitman, of North Carolina; Dr. Franklin Staples, of Minnesota; Dr. Joseph R. Smith, of United States Army; Dr. Samuel C. Busey, of Washington, D. C. Treasurer, Dr. Casper Wistar, of Pennsylvania. Librarian, Dr. William Lee, District of Columbia.

The time and place of the next meeting are fixed for the first Tuesday in June, 1877, at Chicago, Ill.

A communication was read from the British Commission, asking for a list of the regular American medical colleges, which was of the nature of a fire-brand and occasioned a lively discussion.

Dr. Busey denied the right of the judicial council to determine the standing of any college, and offered a substitute for the resolution, which, after debate, was, on motion of Dr. Power, laid on the table.

The hour for adjournment having arrived, the newly-elected president, Dr. Bowditch, was conducted to the platform, when Dr. J. Marion Sims, the retiring president, read his farewell address. He said, "The moment draws near when we must say farewell. The events of this session will soon become history. In after years we shall doubtless note changes in our organic laws that may be traced back to this meeting."

Referring to the prize essay of Dr. Culberson, he said the paper would confer honor and renown on this association and on American literature. The doctor referred in a feeling manner to the absent ones, those who have passed from this earth, and others who are traveling abroad for the benefit of their shattered health.

In closing, the doctor, in speaking of the Southern delegation, said, "With returning prosperity our Southern brethren will be found working together shoulder to shoulder with us. Where once there was bitterness and hate, there is now peace and love. We have risen above all sectional feelings, which is as it should be, and now in this Centennial year Massachusetts and South Carolina can join hands in this peaceful hall of science." The gentleman here turned to the newly-elected president and clasped his hand, which action was vociferously applauded, the scene lasting for some minutes. The speaker then introduced the new president to the convention, saying, "May the blessings of Heaven rest upon his head, on our whole country, and upon every member of this association."

Dr. Bowditch then in a brief address returned thanks to the convention for the honor conferred upon him, hoping that the pleasant relations now existing would continue.

Dr. E. P. Squibb offered the following preamble and resolution :—

Whereas, The usual time for a decennial revision of the United States Pharmacopœia is drawing near; and

Whereas, The plan of révision and publication in force of 1820 may not now be the best that could be devised; therefore

Resolved, That the American Medical Association take the whole subject of the national pharmacopœia into consideration, for a review of its management, and for the present time with especial reference to the following questions :—

First, Whether the present plan of decennial revision and publication be practically sufficient for the needs of the materia medica and pharmacy of the present time; and, if not sufficient, whether a plan could be devised which might offer probable advantages enough to justify an attempt to disturb the present one.

Second, Whether this association be the proper custodian in this country of the interests involved in the national pharmacopœia; and if it be the proper source of the national codex, whom can it invite to coöperate with it in the work?

Third, If it be a work for this association, in what way can its details be wisely undertaken with any prospect of material improvement upon the present plan?

Resolved, That in order to facilitate mature and general deliberation upon so important a subject, the final discussion of these resolutions be laid over for at least one year, and that the matter be recommended to the president of the association for consideration in his annual address to the meeting of 1877.

The resolutions were adopted as read.



CADAVERIC RIGIDITY FROM A MEDICO-LEGAL POINT OF VIEW.

A COMMUNICATION by M. Jaumes concerning the possible consequences of cadaveric phenomena is contained in *Le Mouvement Médical* of April 29, 1876. The case which led to the discussion of the question was that of a young man,

X., who disappeared on the 12th of September, 1875, from a hamlet in the department of Lozère. On the 13th his vest and cane were found on the banks of a swollen stream (it being a time of great inundations in that region). Two or three days later there were found on the banks of the same stream the pantaloons buttoned to the waistband, and the leather girdle which, attached to the pantaloons behind, kept the latter in place on the body of X. The strap was buckled, and its end passed through the slide. Finally, September 20th, the body of X. was found on the banks of the same stream, forty kilometres below where he was seen for the last time.

Two competent practitioners, who had charge of the autopsy, found on the anterior of the cranium an extensive fracture sufficient to account for the death, the character of which showed that a sharp and at the same time contusing instrument had been employed.

Certain circumstances having rendered necessary a subsequent inquiry, MM. Estor and Jaumes were charged with investigating the affair anew. They came to the same conclusion that had been before reached — that the death did not result from suicide nor accident. They were, moreover, called upon to answer the following question: Could the swelling of the limbs resulting from asphyxia from drowning permit the pantaloons to escape from the body of X. under the existing circumstances? To this question the reply was made that they did not believe that X. died from asphyxia resulting from drowning. That a very marked swelling of the limbs, so far from favoring the escape of the pantaloons, would probably hinder it. Consequently to the question a negative answer was given. But the further question was considered whether the cadaveric changes occurring in the body of X. during its stay in the water could have favored the escape of the pantaloons and leather girdle.

The most interesting of the cadaveric changes was the swelling of the abdomen. This cavity was distended with gas, and had a form more or less ovoid, its most projecting point being near the umbilicus. If, now, when the body of X. was cast into the water, the waistband of his pantaloons and the girdle had been bound about the body above the umbilicus, it is evident that the swelling would have a tendency to push the band of the pantaloons and the girdle farther up, and to have hindered their escape toward the thighs. If, on the contrary, the pantaloons and girdle had encircled the body below the umbilicus, the distention of the bowels would have tended to push them from above downwards. By this mechanism it could be explained that they should have been pushed to the groins, but when at this point, what would have happened? The swelling of the limbs in this case could not be supposed to have any influence in one way or the other regarding the spontaneous disengagement of the limbs from the pantaloons. Too short a time had elapsed for gaseous putrefaction to have manifested itself in the cellular tissue of the limbs of a body submerged in water of which the temperature was quite low. Swelling of the belly might have begun, but it could not have been marked. Would it not be possible, however, that the body, rolled along by the current, especially if it were very rapid, might have encountered some obstacle to which the pantaloons and belt had become fastened, and that little by little by the force of the current the legs had become disengaged from the pantaloons until they

were entirely freed from them? But then the garments, no longer undergoing the traction from the body which had kept them attached to the obstacle, would have floated, and in their turn have escaped from the obstacle and have somewhere stranded. Such are, theoretically, the results which the supposed phenomena would have produced.

ROTARY SPASM OF THE HEAD AND NECK.

A CASE of this disease, or hypercinesia of the spinal accessory nerve, is reported to *L'Union Médicale* of April 25, 1876, by Dr. Bonnet de Malherbe. The patient was admitted to the hospital at Neris in July, 1875, as afflicted with rheumatic torticollis. He was a man of fair constitution, of nervous temperament, but of regular habits. In December, 1873, he had an attack of general muscular rheumatism, and was not able to resume work for seven or eight months, and even then he was not entirely well. In October, 1874, he was seized with a violent affection of the head, which in the course of a month was succeeded by a rotary spasm of the neck. The spasm was unilateral, on the right side, and clonic. These phenomena ceased during February, 1875, but soon reappeared. The patient was treated with cold baths, the bromide of potassium, and hypodermic injections of morphia, but without success. Such was his condition when he presented himself to be admitted to the hospital. The rotary movements of the patient were fourteen in the minute; his sleep was calm, and lasted on an average five hours; he was rather thin, but his general condition was nearly normal. Because of the prolonged attack of rheumatism which had been the commencement of the patient's present condition, the diagnosis of rheumatic torticollis was accepted, and the treatment by warm baths at 35° C. for three quarters of an hour, and of local douches moderated to 38°, was prescribed. A few days later vapor baths were tried, but they had to be abandoned because they produced in the patient a too stimulating effect. The persistent character of the rotary spasm soon convinced Dr. Bonnet that he had something more than a case of torticollis to deal with. In the course of his researches he found described by Trousseau an interesting case of chorea accompanied with rotary movements of the head, which seemed to be somewhat analogous to that of his patient. But at last, in the treatise on pathology by M. Jaccoud, he found a better description of his patient's condition, to which the name of hypercinesia of the accessory of Willis was applied. The muscles supplied by the external branch of the spinal nerve, the trapezius and the sterno-mastoid, were the seat of the convulsive movements in the case under description.

Among the authors who make mention of the affection M. Jaccoud cites a few English and German; hence Dr. Bonnet thinks the disease has been but little observed in France. He mentions in particular a thesis sustained before the faculty of Strasbourg by a young military surgeon, M. Fournier, having for its subject the *tic rotatoire*. The disease seems to be the same as that observed in the patient at Neris.

Convinced that the phenomena were due to some nervous derangement

rather than to a rheumatic affection, Dr. Bonnet prescribed for his patient the use of baths of a temperate heat, prolonged for two or three hours. His patient, however, was not essentially benefited. Their use was discontinued for a while, and resumed again together with hypodermic injections of morphia but the results were unsatisfactory. Since then the bromide of potassium has been tried for a long time and in large doses, but without effect. Dr. Bonnet is convinced, from his own observations and from the authority of Trousseau and Jaccoud, of the incurable nature of the malady. M. Jaccoud mentions the severe muscular efforts required in lifting heavy burdens as one of the causes of the disease. The occupation of Dr. Bonnet's patient required such severe muscular strains.

MEDICAL NOTES.

— The Editors have to announce with the greatest regret, in which they will be joined by all friends of the JOURNAL, that Dr. F. W. Draper has felt it necessary to resign his position as assistant editor, which he has filled with great ability for several years. A large share of the success of the JOURNAL is due solely to him. Dr. A. L. Mason has been elected to the office by the board.

— Professor Leyden has received a call to the University of Berlin, in Traube's place, and will accept it.

— Sir William Fergusson is seriously ill. His health has been declining during the past year, and he now suffers from dyspnoea, palpitation, and dropsical symptoms, due to hypertrophy of the heart, with valvular disease and emphysema of the lung, with renal albuminuria.

LETTER FROM PHILADELPHIA.

MESSRS. EDITORS, — The yearly meeting of the American Medical Association for 1876 found a competitor in the Centennial Exhibition, through whose attractions the association undoubtedly lost vigor and interest. This refers especially to the section meetings, which were not well attended. This is to be regretted because it is mainly through discussions upon papers read before the sections that the yearly advance in the various branches of medicine becomes evident. The delegates do not, perhaps, realize how greatly they have been favored by the weather of the past week. The skies have been clear, the temperature moderate, cool breezes have been constant. Many of the delegates soon found it impossible to attend at the same time to both work and play, and so these many honestly and frankly went in for play. The result was that the medical meetings were run by a comparatively few men.

At the opening hour of the morning sessions the majority of the delegates were on hand, but within sixty minutes many of them found that their centre of gravity lay in the direction of the exposition; so they rapidly restored their equilibrium by leaving medical matters in the hands of the earnest ones. More than seven hundred and fifty delegates were registered. Less than one

half of them were present by the time the morning sessions were an hour old. In the sections it was still worse.

The section on surgery generally attracted a fair number of delegates, but in the other sections the hour of meeting frequently failed to find a quorum present. I may, perhaps, make an exception of the section on obstetrics. This branch was moderately well attended. In his final address Dr. Sims expressed the belief that the work which has been done at this meeting of the association will compare favorably with what has been accomplished by former annual meetings. I can hardly believe this statement, but if it be correct, then the American Medical Association accomplishes but little.

The initiatory session was opened at eleven A. M. on Tuesday, June 6th, by Dr. Bowling, of Texas, who called the meeting to order and introduced the president, Dr. Sims. A prayer was then offered by the Rev. Dr. Beadle. Dr. Pepper, chairman of the executive committee, read a graceful address of welcome. The reading of the roll-call was by vote omitted. The secretary then submitted several protests from various quarters, following which Dr. Sims began his address to the association. This address created universal disappointment. He prefaced by welcoming rather effusively the twelve or fifteen ladies who were present, but promised them that the latter portion of his address would touch upon a subject not mentioned in polite circles, and he therefore deemed it wise for younger ladies to retire. (Of course they all remained.) The older ones might listen with profit, for it is they who can help us control the evil to which he proposed to refer. The two topics of his address which remained on the minds of his listeners were the code of ethics and syphilis. In regard to the first he said that certain delegates who considered the code perfection, and who dared not mention it except with reverential awe, might be shocked by his views.

"The profession are constantly violating the code. We all violate it. Otherwise, how dare we prescribe chlorodyne, McMunn's elixir, and other secret remedies? Why should not physicians take out patents for instruments which they invent? Their neglect to do so, or rather the law of the code in this direction, simply enriches the instrument-maker. Why are differences of opinion between consulting physicians kept secret? Why should this be? It is a falsehood, a deception. The code works unequally. Honorable men don't need it; dishonorable men are not influenced by it. Of what real use is it?" Delegates were irritated by these remarks. On all sides was heard the remark, "Won't the quacks chuckle when they hear the views of Dr. Sims." "These ideas would come from Dr. Sims with better grace if he himself had not been reproved by his own society for violation of the code."

Dr. Sims then took up the subject of syphilis. He spoke of the terrible evils which are the result of this disease. He then detailed, *ad nauseam*, the many ways by which syphilis is propagated, ways which are perfectly familiar to a first-course student. These details, which were prolonged until the delegates were fatigued, were "flat, stale, and unprofitable" to every man in the hall.

The remedy by which Dr. Sims proposed to effect the arrest of contagion by syphilis is to invest boards of health in seaport towns with absolute, arbi-

trary power. He would give them the same control of syphilis as they now have of cholera and small-pox. He believes it is in the steerage of ships that the disease is imported. He would have all immigrants thoroughly examined, and those found tainted should not be allowed to remain in the country. He was an enemy to the license of prostitution as adopted by the French. He thought the partial license law of England wrong. He would stamp out and destroy syphilis by eternal vigilance. This is indeed very desirable, but Dr. Sims's plan is utopian and impracticable. Even while he spoke, the scheme was made to appear inconsistent by the story he told of a man who infected his wife and all their subsequent children, although he himself was apparently in robust health, showing constitutional syphilis only in a slightly scaly condition of the palms of his hands and his scalp. It is difficult to see how arbitrary power in a board of health could have prevented propagation in this case. This subject was made the uppermost topic in the address, and could not by any amount of charity be made to appear edifying.

In regard to medical education in America, Dr. Sims frankly confessed that the association had not made any advance in raising the standard of education. He complimented the Harvard school for her courage, and added that until professors were salaried and freed from the influence of students' fees, nothing could be done in this matter. Dr. Baldwin's scheme for centralizing education under the auspices of the government had his sympathy, but it excites no widespread interest.

A general reception, supper, and promenade concert were the united entertainment which the delegates were invited to enjoy on the evening of the first day of the session. It was a delightful occasion. Many ladies were present. The profession was represented by many brilliant men. The music and supper were excellent in quality and abundant in quantity. The whole affair was enjoyable, and lasted from eight to twelve o'clock.

The marked feature of the second day, perhaps of the whole session, was the reading of his paper upon the diagnosis of blood-corpuscles by Dr. Woodward, before the section on medical jurisprudence and psychology. The large hall of the College of Physicians was crowded by delegates, who formed Dr. Woodward's audience. The subject was illustrated by superb micro-photographs of the blood-disks of man and various animals. The reading was followed by a discussion between Drs. Woodward and Richardson, during which friends of both gentlemen were pleased to hear the expressions of mutual regard for the opinions of each, and were especially glad to hear Dr. Woodward's hearty assertion that among all the experts whom he had criticised in his paper, Dr. Richardson was the most careful in his statements in regard to diagnosis of blood-corpuscles, and that he least of all deserved criticism for over-enthusiasm. An outline of the subject matter of the paper has been furnished you in the general report. Unless I am in error, this was the only working session of this section. The chairman, Dr. Howard, did not even read the annual address upon topics connected with the specialties of the section. The paper had been prepared, but Dr. Howard was physically unable to read it.

Entertainment in the evening of the second day was found in Prof. George F. Barker's fine lecture on *The World of the Seen and the Unseen*.

The morning meeting of the third day was made interesting by Dr. Busey's well-written and well-delivered paper on Obstetrics and Gynecology. It did not pretend to offer anything original; it was simply a mirror of the progress made during the past twelve months in whatever relates to obstetrics and kindred branches. But the mirror was bright and clear.

There was a rather spicy discussion as to whether the roll should be called. During its reading the names and credentials of delegates were keenly scanned, and several protests were entered.

It was moved that the admission of the one lady delegate should be decided by the judicial council. This motion was voted down, and the lady admitted by an almost unanimous vote. Otherwise objectionable delegates were at once referred to the council.

It was in this council that the warmest sparring of the session occurred, and the contests were in relation to the admission of delegates whose credentials were pretty savagely handled by certain members of the council.

Thursday evening was devoted by delegates to the very elegant receptions given at the houses of eight physicians of Philadelphia.

I have given you full details of the Friday morning meeting.

Dr. Bowditch accepted the office of president for the coming year in simple language, full of earnest feeling. The final address of Dr. Sims was beautiful and impressive, and it was a very remarkable coincidence in this Centennial year of our country's history, — during the hundred years of which, and especially since 1860, there has been such bitter feeling between Massachusetts and South Carolina, — that the chief chair in the gift of the association passed from the keeping of a South Carolinian into the possession of a Massachusetts man. Dr. Sims with great feeling congratulated the association upon the fact that no political differences entered into the deliberations of that body. "What better proof of this can there be than in your choice of presidents for 1876 and 1877? South Carolina takes the hand of Massachusetts" — and here he cordially grasped the hand of Dr. Bowditch, amid the most energetic and sympathetic applause of the whole audience. The incident was beautiful and dramatic. The audience was then invited by Dr. Pepper to visit the university buildings, and the association adjourned.

It cannot be expected that every delegate should be an intellectual prodigy, but why, in the name of all that is harmonious, cannot New York city prevent the delegation of such an individual as came to the surface in the final meeting of one of the sections, just at the most inauspicious moment, when everybody was on the *qui vive* for an adjournment? This person is old enough to know better, but that seems to be his one respectable quality as a physician.

He began by saying that in the latter months of gestation anasarca sometimes appeared, and women became blind. He had had great experience with the ophthalmoscope, and in such cases he always examined the eye. Every physician should carry an ophthalmoscope in his pocket. It is a convenient thing for examination of the pharynx, and there is no other instrument with which we can so easily examine the *larynx*! Of course I was naturally reminded of the lady who, while being examined *per vaginam*, asked the

physician (a friend of mine) if he would n't be kind enough, while about it, to take a look at her liver. I should n't have been surprised if this garrulous delegate had finally connected ophthalmoscope and rectum. After he had ambled on a while, the chairman gently asked him to kindly mention the subject of his remarks. But if a church had fallen upon his head he would n't have known it, and in spite of the hint he talked the room nearly empty. His name begins with the seventh letter of the alphabet, and I am glad to know that in New York, whenever he attempts to speak at medical meetings, he is at once sat upon as the living epitome of Webster's definition of a bore. Another gentleman was one who invariably spoke on all questions, and was never noticed, attempted to discuss resolutions after they were passed, and said "pharmashootist" instead of the right word. Do you know why such men are delegated to a national association?

Dr. H. C. Wood has been nominated to the chair of materia medica and therapeutics in the University Medical School, *vice* Professor Carson resigned. Wood is a brilliant man, and an acquisition to the university faculty. At a meeting of the association of editors held this week, Dr. Wood was chosen president of the association for 1877, and Dr. Frank Davis permanent secretary. At this meeting Dr. Bell, editor of the *Sanitarian*, violently attacked medical education in America, called it a nuisance, and thought the only thing to do was to abate the nuisance at the earliest possible moment. His remarks gave rise to a heated discussion. There has also been held a meeting of colleges (medical) to form a permanent association for mutual support, and to endeavor to raise the standard of medical education in America. Twenty-three colleges were represented. An abstract of the business accomplished will shortly be furnished to medical journals. At present it is held in confidence. Nothing final was done because none of the representatives had the power to bind their colleges. I think I may say that the week has been thoroughly enjoyed by every delegate. Hospitality was tendered on every hand, and our noble exposition left nothing to be desired in the direction of outside entertainment. X.

PHILADELPHIA, June 10, 1876.

ERRATUM. — On page 674 of the last number of the JOURNAL, line 6, for "of his" read "to his knowledge."

DRS. F. B. GREENOUGH and John Homans have resigned their positions on the surgical staff of the Carney Hospital, and Drs. Thomas Dwight and E. H. Bradford have been appointed to the same.

BOOKS AND PAMPHLETS RECEIVED. — Medical History of our West African Campaigns. By Surgeon-Major Albert A. Gore, M. D. London: Baillière, Tindall, and Cox. 1876.

The Student's Guide to Dental Anatomy and Surgery. By Henry Sewill, Member of the Royal College of Surgeons, and Licentiate in Dental Surgery. Philadelphia: Lindsay and Blakiston. 1876. (From A. Williams & Co.)

Statistics, Medical and Anthropological, of the Provost-Marshal General's Bureau. By J. H. Baxter, A. M., M. D. In two Volumes. Washington: Government Printing Office. 1875.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held on Monday evening, June 19th, at eight o'clock. Dr. J. G. Blake will read a paper on Ulcer of the Stomach.

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THE BELFRY MURDER CASE; THE CONFIRMATION.¹

BY B. E. COTTING, M. D.

At a meeting of this society in February last, I gave an account of the case of Mabel H. Young, the little girl murdered in a church tower, and stated, from a careful study of the injuries before and after her death, the conclusions arrived at as to the cause and manner of these injuries, the number of blows given, and the instrument used by her assailant.

The statement then ventured was as follows: "That after her arrival by the closed stairway into the empty room under the belfry, the little victim was seized by the upper arm near the elbow, and the first and severest blow inflicted on the top of the hat and head with the edge of the bat; . . . that on the receipt of the blow the child fell, or, limp and flaccid, was still held up by her arm; that in such a position the other blows were given; . . . that the swellings and fractures indicated that the blows came from the right side. The last blow, while the child was near the floor, missing the head, hit the nose, and was immediately followed by nose-bleed. If, now, the child was left on the floor while the murderer ran up the ladder to open the trap-door to the belfry, as is quite a natural supposition, there would be time enough for the blood found upon the floor to have flowed from the nose, the bleeding in such injuries being usually instantaneous and very soon over. Taken thence to the belfry as hurriedly as possible, stunned and senseless, the child was left for dead."²

The above "theory" and the reasonings which led to it have received remarkable confirmation. The deed was done by the instrument designated, and in the manner and place described. The very details have been surprisingly verified.

When the condemned man found that there could no longer be any hope of mitigation of sentence, he made several confessions—to his counsel and to others who were allowed to visit him. These confessions were repeated to newspaper reporters and published.

From accounts thus published, omitting portions irrelevant or imma-

¹ Reported to the Roxbury Society for Medical Improvement, May 25, 1876.

² Boston Medical and Surgical Journal, April 13, 1876.

terial, the following extracts of professional interest are taken, namely : "that having unlocked the tower door in the upper vestibule, he asked the child to go up-stairs with him, by the closed stairway, to the floor below the bell deck ; that when they reached the top of the stairs the child was walking towards the foot of the ladder leading to the bell deck, with her foot [face ?] towards him, when he seized the bat and struck her upon the head ; that this blow felled her to the floor ; that he took her by her left [right ?] shoulder with his left hand, and raised her from the floor, and with the bat in his right hand he struck her a second blow ; that when he struck her the second blow he heard the bones crack in her head ; that he laid her down, as near as he could recollect, where the spot of blood was found in the room below the bell deck ; that she did not scream, and he supposed that she was dead ; that he then went immediately down the stairs by which they had ascended to the tower ; and that, on peeping through the door and fearing that he was seen, he went back, took the child, carried her up the ladder, opened the trap-door, and laid her over upon the coping of the bell deck ; that then he returned down the ladder, went down the stairs, and locked the tower-door behind him."

In another account he is reported to have said that "he invited her to go with him into [the room below] the belfry. There he struck her with the club two or three times, and she fell where the blood was found. Then he picked her up and carried the body to the place where it was discovered" (*i. e.*, in the belfry itself).

Thus it appears that nearly all the particulars of the theory are borne out by the facts as given by the prisoner himself. Indeed, the theory does not differ more from the several versions of these confessions than they do from each other. The victim was enticed up, as supposed. She was struck, as supposed, several times. The post-mortem proof that there was a second blow, namely, that the skull at the place described was "broken squarely through both tables," was singularly confirmed, and itself confirms the confession that "on the second blow he heard the bones crack." This "crack" was rendered possible by the abruptness of the fracture, as well as by a grating, or crepitus, with parts previously broken.

Felled by the first blow, she was held up nearly as supposed, but not by the "left shoulder"¹ or *left* upper arm, for, as the head would naturally droop to the side opposite the point of support, the bruises in the scalp and the fractures in the skull would then have been on the

¹ This was evidently an unintentional error of the narrator, or misapprehension or mishearing of the reporter ; as was the word *foot*, for *face*, in a previous sentence, since *foot* could not have any intelligible meaning, whereas the bruise in the scalp and the fracture in the skull from this first blow showed unmistakably that the victim's *face* was turned toward the assailant ; and that of *belfry*, several times, when the room under the belfry was unquestionably intended.

left side, whereas they were in fact unmistakably on the right side of the head, as any one may be convinced by a simple inspection of the skull as preserved.

"He laid her down," as claimed, "where the spot of blood was found in the room below the bell deck." "He supposed she was dead." "He then went down-stairs to the tower door, peeped through for a moment, feared that he was seen, and withdrew; then went back, and carried the child up the ladder" to the belfry — all this requiring, as the supposed course would, "time enough for the blood found on the floor to have flowed from the nose."

The injury to the nose, which is not alluded to in the confessions, could not have arisen from a mere fall upon the floor, as it was not an expanded bruise of the parts, but quite limited, and must have been done by the bat, for it corresponded in shape to the edge of such an instrument. The indentation was sharply defined, angular, and deep; the skin was crushed down and the cartilages were contused and nearly torn from the nasal bones. That the skin itself was not bruised through, and an open wound made at that point, is not surprising, considering the location, the supporting elasticity of the cartilages, and the material of the weapon. The right cheek also, with its underlying malar bone, in part arrested the blow, which there came from the right, as the swelling on that side clearly indicated. Moreover, the floor, though of unplanned boards, was level and even; and there was not any projection of it, or thing upon it, near where the child was, capable of producing such an indentation or bruise into the nose, even if the child had fallen directly upon the nose or face. Besides, a fall with the whole weight of the head and body could not have produced such an injury, even if the fall had been upon a metallic substance.

What was done by the operator after this, according to other portions of the confessions, is not of special professional interest. When his counsel said to him that he "was surprised to find that the government theory of the homicide was so nearly correct," the prisoner answered that "it was correct in almost every particular."

RARE CASE OF GALL STONES DISCHARGED THROUGH THE SIDE.

BY DANIEL PERLEY, M. D.

THE patient, Matthew Plumsted, harness maker, was born in Norwich, England, A. D. 1800, went to Canada in 1812, came to the States in 1818, and to Lynn in 1835. He had been subject at times to severe pain in the region of the liver for some years, when, in the latter part of the year 1869, an abscess formed in the right hypochondrium, attended with great disturbance of the system.

The symptoms were so alarming that, in consultation with my friend the late Dr. B. B. Breed, we decided to make an opening without waiting for any thinning of the integuments. There was an immediate discharge of pus, yellow bile, and small black specks, which were easily rubbed up and became of a bright yellow color. He was somewhat relieved, and continued to improve with the discharge of similar matter, with now and then a clogging up of the aperture, till in about a month gall stones of various sizes up to that of a cranberry began to issue and continued with volcanic irregularity of rest and activity till December 28, 1873. There has been no eruption since. He is now robust and able to attend to his business in better health than for many years. In a hasty examination of the journals of the last forty years I have been able to find but two cases of the kind.

RECENT PROGRESS IN SURGERY.¹

BY J. COLLINS WARREN, M. D.

Bacteria under Antiseptic Dressings. — Dr. M. Schüler² reports experiments performed by him for the purpose of determining the presence of bacteria under the salicylic-jute dressing in the wards of Professor Tiersch. At the change of each dressing a drop of the secretion of the wound was placed in a test-tube with twenty cubic centimetres of a fluid called Bergmann's fluid, to enable the bacteria present in the secretion of the wound to multiply. In many cases in which there had been no fever these tests gave no bacteria. Bergmann's fluid remained clear for several weeks. In other favorable cases at the end of ten days there was a slight cloudiness in the fluid, while where pus was taken from wounds not treated in this way, the conditions being otherwise the same, there was marked cloudiness at the end of the second day. In cases in which the dressing did not prove efficient, either from imperfect application or from the fact that the operation had been performed in a part already inflamed, the cloudiness appeared rapidly. In many of these cases there was fever. In all cases of surgical fever the cloudiness appeared more or less rapidly. As the fever subsided, the cloudiness in most instances disappeared.

He concludes that under this mode of treatment it is possible to exclude bacteria from the wound, but not in all cases, for when the tissues were previously inflamed, or contained pus, the most carefully applied dressing could not prevent their appearance. The treatment prevents the entrance of bacteria from without, but not their introduction in the secretion of the wound derived from tissue already teem-

¹ Concluded from page 688.

² *Centralblatt für die medicinischen Wissenschaften*, No. 12, 1876.

ing with bacteria. The significance of the appearance of bacteria in wounds, even those treated antiseptically, and the occurrence of febrile complications, the writer thinks much overestimated. It is evidence neither for nor against the connection of bacteria with surgical fever. The fever begins at the moment when the bacteria first penetrate the tissues. Healthy granulations, such as are found most frequently under antiseptic dressings, offer great protection against this occurrence. Moreover, the dressing prevents greatly the development of bacteria, and thus lessens their power to do harm.

Radical Cure of Hydrocele by Incision, with Antiseptic Dressings. — Professor Volkmann¹ describes this method of treating hydrocele, employed in seventeen cases. In each case all the precautions of the antiseptic treatment were carried out carefully. The hair of the pubis and scrotum was shaved off, and the parts carefully washed with a solution of carbolic acid. During the operation carbolic spray was used. The incision was carried from the external ring to the base of the scrotum. The cavity of the sac was repeatedly washed out with a three per cent. solution of carbolic acid. The edges of the tunica vaginalis were stitched to the edges of the skin. For this purpose the finest silk, used double, was employed, and from fifteen to twenty sutures were taken. The vessels were secured with catgut ligatures. The antiseptic dressing was so applied as to bring the parietal layer of the sac in contact with the testicle, the wound remaining open. The action of the spray and of the carbolic wash has the effect of producing a contraction of the scrotum and diminishing the size of the cavity. If there is a great redundancy, a portion may be excised. If the edges of the wound are so thick as to make it a deep one, a drainage tube may be inserted. Before applying the dressing a bolster should be placed under the hips to make the parts prominent. The scrotum is bandaged with eight to ten thicknesses of the antiseptic gauze bandage, four inches wide. A large mass of gauze is then laid over the genitals, with a hole in the centre to admit the penis. This covers the groin and lower part of the abdomen, and is firmly secured by gauze bandages dipped in a solution of carbolic acid. Cotton-batting steeped in salicylic acid in the manner described in the last report is then packed into the various corners for additional security. The wound in this way is hermetically sealed. This dressing remains on two, three, or four days, or even longer. When removed, the cavity is found to be obliterated by adhesion of the walls, the testicle united to the bottom of the long and narrow wound, which in a few days heals by granulation.

In no case was there any local reaction. There was a slight elevation of the temperature in the evening in a few of the cases. The patients were discharged at the end of a period averaging from eight to

¹ Berliner klinische Wochenschrift, 1876, No. 3.

ten days from the time of operation. On the fifth day they were allowed to get out of bed. In sixteen out of the seventeen cases complete obliteration of the cavity was found to have taken place on the removal of the first dressing. In many of these cases the walls of the sac were thickened and indurated, and in one case calcareous deposits were found in the walls. In two there was hæmatocele. In one case the testicle was incised, and two masses, the product of inflammation, were scooped out. This patient was discharged on the eleventh day.

The Treatment of Cysts containing Rice Bodies in the Neighborhood of the Wrist. — Dr. Faucon,¹ of Amiens, and Professor Duplouy² state that as long as these cysts, on the palmar or dorsal surface of the wrist, interfere but slightly with movement, no treatment should be employed which would endanger the function of the hand. Excision or extirpation is never to be employed, except when fungous degeneration, ulceration, or excessive development of the cyst occurs. A seton brings on an inflammation, which produces adhesions which interfere with the movement of the fingers. Injections of iodine are also thought unsatisfactory for the same reason. Dr. Faucon is inclined to employ puncture followed by compression. In the meeting of the society at which this report was made, Despres advised no treatment unless the cyst had ruptured spontaneously. Boinet had treated two such cysts by opening them with a tenotomy knife, allowing the rice bodies to slip out on the blade, and then injecting iodine; both cases healed without interfering with the motions. Guérin had, since he had used the cotton-wool dressing, opened several, putting cotton between the edges of the wound. All had turned out satisfactorily. Dr. Duplouy had tried iodine twice without success. He had also opened one cyst with the knife, but the fluid and rice bodies re-formed; he opened a second time in two places, one above and one below the annular ligament, and scarified the inside, without result. He next tried ignipuncture, making first some twenty punctures, and later twelve. The tumor began to shrink, and gradually disappeared.

Observations on Hare-Lip and Cleft Palate. — Sir William Ferguson,³ in an article on operations for the cure of these deformities, mentions the case of a young girl, six years of age, on whom an operation for double hare-lip had been performed during infancy. The prominence of the intermaxillary bones had been bent back into the cleft existing in the palate. There was still considerable deformity existing, for remedying which a second operation was performed. In doing this the intermaxillary portion was removed, and, being macerated, showed that by having been placed in its new position at the time of the first operation

¹ Gazette des Hôpitaux, Nos. 12, 13, 16, 17, 1875.

² Bulletin de Thérapie, June 30, 1875.

³ British Medical Journal, December 25, 1875, and January 1, 1876.

the front surface had become the under one, and consequently the teeth, in developing, had assumed a horizontal instead of a vertical position. When this part projects, Sir William is in the habit of cutting and raising the mucous membrane before removing the bone, thereby leaving the membrane as a soft cushion and a more complete covering to the side not interfered with. In perfecting his recent improvement on the operation for closure of cleft in the hard palate, he has found that in many cases stitches may not be necessary. He says, "I have found again and again that, when the edges of the gap have been pared and the chisel introduced, it answers to cause approximation of the raw margins by stopping the opening made on the hard substance by the chisel, with lint, so as as to make the desired closure in the centre. The pledgets of lint keep the parts as steady as, if not more so than, the stitches, whilst they obviate the necessity of the additional injury of the stitch-punctures. This practice, I am confident, is available in all instances when the opening in the bones is of brief extent, as the front stitch in the soft palate may be put in close behind the posterior margin of the bones."

He describes a very useful gag for keeping the mouth open during operations on the palate or any part of the mouth. The two legs or blades of the instrument which pry apart the teeth are connected by a hinge with two powerful handles. The instrument can be kept open at any desired width by means of a screw and button. This seems a much more useful and simple instrument than any gag hitherto devised.

Mr. Francis Mason¹ has been treating lately, at St. Thomas's Hospital, a number of patients with cleft palate by applications of strong nitric acid. The ages of the patients vary from a few weeks to several years. He thinks this method of effecting union is especially applicable to cases in which the cleft is of average extent, and even where the hard palate is partially implicated. The application is attended with no pain or inconvenience whatever to the patient. Other caustics were tried, but nitric acid was preferred. Such cases can be treated as out-patients. The results of this method of treatment have not yet been given, however.

Union of Tendons by Suture. — A number of observations on the union of divided tendons by means of the suture have been reported during the past year, from which the following have been selected. Professor König, of Rostock,² combined the suture with the antiseptic treatment in a case of a wound four centimetres in length on the back of the hand, with division of a tendon. By bending the fingers forcibly backwards the two ends of the tendon were brought to view in the wound. They were united by a catgut suture, and the edges of the

¹ *Lancet*, May 6, 1876.

² *Schmidt's Jahrbücher*, 1875, No. 5.

wound were brought together by four sutures. When the latter were removed at the end of the fourth day the wound had healed, and at the end of the third week the patient could hold the fingers in the extended position. A growth of connective tissue occurs between the ends of the tendon and its sheath, by which the union is effected. By subsequent motion this connective-tissue callus disappears, and the union of the tendon becomes strengthened by a growth of tissue from the tendon itself.

Dr. S. W. Brooke¹ reports a case of wound by a corn knife on the back of the hand, by which four extensor tendons were divided. The patient, a boy eighteen years old, was first seen forty-eight hours after the accident. The free extremities of the tendons were fully exposed by retraction of the margins of the external wound. The extremities of the tendons were more contracted in diameter than retracted in length, and were so dry and twisted that the task of securing them seemed almost hopeless.

"The extremities of the tendons were at first pared, little by little, until the surface looked moist, and then they were slightly beveled and the surfaces secured in apposition by means of a superficial stitch including little more than the sheath. One of the tendons being so dry, shriveled, and curled upon itself, over half an inch was pared off; and though the ends of this tendon were stitched, an interspace of one third of an inch was left between the extremities." A carbolic dressing was applied, the wound being closed with stitches and plaster. "The hand was retained in a splint, by which the carpus and metacarpus were flexed upon the dorsal aspect of the fore-arm, and the arm placed in a sling, with the dorsum of the hand directed downwards. A perforation was made in the splint, so that the patient could medicate the wound. . . . At the end of three weeks pronation and supination caused but slight pain, and the acts of flexion and extension were almost perfect and nearly painless. In five weeks the wound had healed entirely, and he was at work on the farm. In three months he experienced no untoward result from his injury, and had nearly ceased favoring the hand when at work."

Block² reports observations on this subject by Drs. Rochelt and Anger. Rochelt performed experiments upon the tendo-Achillis of rabbits. The tendon, being laid bare by an incision one inch in length, was divided and brought together by a fine catgut suture. Similar sutures held the edges of the wound together. The wound in the skin united in every case by first intention, the outer half of the skin sutures dropping off at the end of six to eight days. The leg was kept extended during this time by means of a splint, which was removed on the tenth day. A day or two later the animal was able to use the limb, and in

¹ Pacific Medical Journal, March, 1875.

² Schmidt's Jahrbücher, 1876, No. 6.

twenty days motion was perfect. In one case, when the wound was examined on the tenth day, the suture was found softened and firmly imbedded in the ends of the tendon. In another animal, at the end of the twentieth day, the knot only of the suture was to be found. In two cases examined respectively on the thirtieth and fortieth day not a trace of the suture was found, the tendons being perfectly normal and free from any adhesion to the neighboring parts. Dr. Anger operated upon a man when the extensor communis and extensor proprius tendons of the little finger had been divided six months previously. They were exposed by an incision through the skin, were freed from adhesions, and the ends were brought to within two centimetres of one another by silver sutures. The hand was kept in position on a splint, and the wound allowed to granulate. The suture came away at the end of three weeks, the wound healed, and the normal motions of the finger were eventually obtained.

Excision of the Elbow-Joint. — Dr. H. J. Bigelow¹ reports a modification of the usual operation where the lower end of the humerus with its condyles is sawed off. It had occurred to him that if, as in the case in which the operation was performed, the condyles were not diseased and could be safely left, and only the articulating surface of the humerus removed, the muscles attached to these condyles would remain undisturbed. The condition of the arm after the operation would then approximate more nearly that of a case of excision when the periosteum of the condyles had been preserved.

After the median incision was made and the ulna cleaned, the end of this bone was removed at a point about an inch and a half from the olecranon. The humerus being dislocated backwards and the ulnar nerve being drawn aside, the humerus was sawed from the bed of this nerve obliquely into the olecranon depression, and similarly on the outside from the external condyle into the same depression. The whole articulating surface was now readily broken out, leaving the condyles. The end of the radius was removed subsequently.

Case of Congenital Fistula of the Neck. — Dr. Frederik Eklund² reports the case of a sailor with a fistulous opening in the neck, five centimetres from the middle line, six centimetres from the right sterno-clavicular articulation, and ten centimetres from the sterno-mastoid process. The opening was very minute, and on pressure the fistulous tract gave vent to a clear, transparent, thick mucus, that clung to the finger and could be drawn out into long threads. Under the microscope the mucus showed small, round cells with granular contents and epithelium of the same character as that found in the lower part of the pharynx and the œsophagus. It was congenital. No relatives were thus affected.

¹ Boston Medical and Surgical Journal, March 30, 1876.

² Schmidt's Jahrbücher, 1875, No. 9.

Had not observed any increase in the secretion or other change at the period of puberty, as is usual with fistulæ of the neck. The opening closed and reopened from time to time. When closed, the tract swelled in the form of a saccular dilatation under the skin. There were no traces of food or drink in the secretion. During the act of swallowing the opening moved slightly toward the middle line, but was not drawn inward. The fistula could be traced from the opening as a fine cord running along the surface of the sterno-mastoid muscle upwards and forwards to its anterior border, and then dipping downwards. A very fine probe was introduced about six centimetres in the direction of the pharynx and hyoid bone. Probing brought on severe reflex action of the muscles of the pharynx and larynx, and those of expiration, as if the soft palate had been tickled, or a foreign body had entered the larynx. An effort to inject water did not succeed.

PIFFARD ON DISEASES OF THE SKIN.¹

A new book on skin diseases, and an American one. Hitherto our native dermatologists have been content with publishing the results of their observations within limited fields of study, and have left to their foreign brethren the more ambitious labors of general book-making; and they have done wisely, we think, in devoting their time so much to observation and in resisting the common temptation of writing more than they knew. Hence the contributions made by them to the literature of dermatology, although sparse and small, have been in great part of real value. But now it seems we are outgrowing this phase of apprenticeship, and are to have from each of our great centres of medical teaching a general book on skin diseases. Dr. Piffard's is before us, and Dr. Duhring's, of Philadelphia, is to be immediately published. Do we need new works of the sort from any quarter? Some of the more recent text-books are excellent, but none were quite perfect even when written, and dermatology makes rapid progress yearly. The last published should, therefore, be the latest, and, if coming from a man thoroughly educated and experienced in his specialty, might well be the best, and supplant its predecessors. Moreover, we have never had a complete American book on skin diseases, and many important questions bearing upon their variations as observed upon this continent would naturally be treated of therein, and insure for it no small degree of interest abroad as well as at home. If the author fail, however, to present the whole subject of dermatology in a more complete and acceptable manner than previous writers; or to give a thorough and discriminating digest of its progress; or to add from an experience of his own, sufficiently wide to warrant the undertaking, new matter of interest, then he had better have left

¹ *An Elementary Treatise on Diseases of the Skin, for the Use of Students and Practitioners.* By HENRY G. PIFFARD, A. M., M. D., Professor of Dermatology, University of the City of New York; Surgeon to the New York Dispensary for Diseases of the Skin, etc. London and New York: Macmillan & Co. 1876.

unbroken the dignified and praiseworthy reticence which has hitherto characterized the American school of dermatologists.

Dr. Piffard's book consists of forty chapters, and the first six of them are devoted to the anatomy, physiology, and pathology of the skin, and to the symptomatology, diagnosis, and classification of its diseases. The anatomy is briefly described and illustrated by well-selected and clear wood-cuts. Several important omissions are noticeable, however: nothing is said about how the hair is formed, and no reference is made to the interesting investigations of Pincus in relation to its color, viability, etc. Yet the chapter is not wanting in novelty, as will be seen by the accompanying statements of the author's views concerning the formation of the horny layer of the epidermis: "Most writers state that this is derived from the Malpighian layer; in other words, that the cells which at one time occupied positions in this latter layer afterwards become cells of the stratum corneum, being pushed outward by new cells forming beneath them. This I believe to be an error. Cells of the rete always remain such, and do not become horny, and the cells of the horny layer never were cells of the rete. Each layer is regenerated independently of the other." This opinion he bases mainly upon the fact of the existence of a peculiar layer of cells between the horny and the mucous layers called the "stratum lucidum." It will readily be seen on what insufficient ground he would substitute for a doctrine universally accepted and substantiated by every observation of the skin in health and disease a view without the support of analogy or even probability. Such views are certainly out of place in a text-book for students until they can be shown to rest upon a more stable basis.

The lesions of the skin can hardly be said to be described at all. A profile diagram of their comparative size and shape is given, and to this is added the briefest definition which might answer for a condensed dictionary of medical terms. Yet in the chapter on diagnosis the author devotes considerable space to demonstrate the advantages of the use of the compound, binocular microscope in examining the surface of these lesions upon the patient.

The author's views concerning the classification of skin diseases have been already published in part.¹ He advocates what he calls a natural or ætiological system, having casualty as its corner-stone, and divides cutaneous affections into five groups: I. Diathetic affections; II. General non-diathetic affections; III. Reflex affections; IV. Local affections; V. Affections of uncertain nature. Having premised that his object in devising this scheme was to have a system "which will prove of the most practical use, and one which at the same time does not draw too much upon theory at the expense of facts," he dismisses the plan of "the German school," which rests upon the pathological anatomy of diseases, which we do know something about, with the simple remark that it has "attracted attention," and selects for the foundation of his own plan that of which we know less than of anything else in dermatology, namely, causation, and which in fact is almost wholly a matter of theory. It is not at all strange, therefore, that we find certain of the most important affections arranged under classes which are purely imaginary, and others put into positions which they could maintain only by begging the whole question of their

¹ American Archives of Dermatology.

right to it, and that Class V. is made up of so many affections which the author himself does not know what to do with as to prove the insufficiency and impracticability of the whole plan according to his own standard. Take, for instance, the class Rheumides under Group I., for we have not space to consider more. This is a term invented by the author, and used by him synonymously with *dartre* of the French, to signify a diathesis, and preferred by him because, in his own words, it implies the idea of exudation; because the blood condition in the affections included under it — eczema, psoriasis, pityriasis — is similar to that in rheumatism; because there is a wide-spread belief in the existence of a constitutional condition which gives rise to *salt rheum*; and lastly because the French term *dartre* is “utterly without signification to the English or American mind.” The existence of any such diathesis rests on pure assumption, and is a theory with which all are now well acquainted. It would be easy to invent names for half a dozen other diatheses and apply them to as many groups of affections of the skin, or other tissues in fact, which present points of mutual resemblance, and it would be impossible to prove that such diatheses did not exist; nor would it be necessary so to do. The proof must come from those who uphold and promulgate such theories. Dr. Piffard confesses that an absolute demonstration of the dartrous or rheumatic diathesis is impossible, nor does he offer any evidence in support of it. His argument is mainly a statement of the belief among physicians of all times that there is something constitutional at the bottom of certain skin diseases. Unfortunately, when we look for the particular nature of this something we find a great diversity of opinion concerning it among the believers, its strongest supporter, Hardy, openly confessing his ignorance as to its character. According to the author, his diathesis consists in an accumulation in the blood of an excess of certain excrementitious substances, namely: “uric acid, lactic acid, oxalic acid, creatin, creatinin, and possibly others;” in other words, the rheumides are due to “incomplete oxidation.” This is bringing the question within the bounds of demonstrative reasoning, and makes his speculative chapter on the pathology of these affections unnecessary, because it is to be solved not by the pen but by the test tube. So, too, did space allow, would we object to his calling the two kinds of lupus scrofulides and mixing them up with epithelioma; and to his placing acne in the class of reflex affections; and to the greater part of his arrangement as positively erroneous or unproven.

But let us leave these matters of theory, with which the book is overfilled, and look briefly at its more important, practical features. The descriptions of individual affections are generally clear, brief, and good, and the directions as to treatment, so far as they go, judicious. Of course, there are many points with regard to which opinions very different from those expressed by the author are held by other dermatologists; so numerous are they, in fact, that it will be wiser in a notice of this sort to leave them all alike untouched, although they include grave errors, as we believe.

The subjects are not at all equally treated, some important diseases being dismissed with the briefest notice, while long chapters are given to useless discussions of matters purely theoretical. Of the seven pages allotted to scabies, for instance, three are occupied by the history of the discovery of the animal,

which can be found in several other works, while its treatment is disposed of in a single page. Urticaria receives but two and a half pages, the latter fraction being sufficient for its treatment, while twelve pages are taken up with the histology of lupus. Diseases of the hair are almost wholly passed over in silence, and other instances of similar neglect might be mentioned which greatly detract from its merits as a manual.

The text is illustrated by forty-nine wood-cuts, which are mostly borrowed from well-known works, and by fine plates of photo-micrographs of sections of the skin in lupus, rosacea, elephantiasis arabum, and keloid. The latter are well executed, but of little value. To one well acquainted with the microscopic appearances they are intended to represent they recall the gross features of tissue change presented by this instrument, but for the student and practitioner, who are to be instructed, they wholly fail to convey the necessary minutiae of detail and the diagrammatic effects of a good engraving. The paper and printing are excellent.

In conclusion, we would say that we regard Dr. Piffard's book as a valuable and independent contribution to dermatology, but it cannot be considered as representing fairly the American school of dermatologists, or as the best manual for the student that, we will hope, the latter may produce.

BAXTER'S VITAL STATISTICS.¹

CRITICS generally refer to works emanating from the Government Printing Office, if they refer to them at all, in a very depreciatory manner. This verdict is not surprising. Such a mass of rubbish is annually turned out from that establishment, such torrents of turbid congressional platitudes, such incredible accumulations of chaff in the shape of agricultural and patent reports, such impudent advertising sheets in the guise of reports on lying-in hospitals, that it is not wonderful that the volumes bearing the government imprint should be chiefly sought by the dealers in waste paper. Yet out of this Nazareth some good, and not infrequently something of surpassing excellence, is brought to our notice. Now, an account of ocean currents or a star catalogue is printed, representing the scientific labors of half a life-time. Again, surveys of mines or of alleged diamond fields have protected public and private interests, and put to shame the venal reports of pretended scientific experts. Or descriptions of unknown territories, or observations on rivers and harbors, or meteorological observations, or experiments for the improvement of the light-house system, are produced in works that constitute standard authorities on the subjects of which they treat. More especially, the vast facilities of the government for the accumulation of reliable statistical information is improved,

¹ *Statistics, Medical and Anthropological, of the Provost-Marshal-General's Bureau, derived from Records of the Examination for Military Service in the Armies of the United States, during the late War of the Rebellion, of over a Million Recruits, Drafted Men, Substitutes, and Enrolled Men.* Compiled, under the direction of the Secretary of War, by J. H. BAXTER, A. M., M. D., Colonel and Chief Medical Purveyor United States Army, late Chief Medical Officer of the Provost-Marshal-General's Bureau. In Two Volumes. 4to. Washington: Government Printing Office. 1875.

and we see in such discussions of the census returns as have lately appeared what services may be rendered to science by a wise utilization of such opportunities.

The work before us belongs to this class. The circumstances under which its materials were accumulated are perhaps unexampled. For the first two years of the civil war the Union armies were recruited by volunteer enlistments under the control of state authorities. March 3, 1863, this method having proved inadequate, Congress created the Provost-Marshal-General's Bureau of the War Department, that the general government should have charge of the recruitment of the armies, by voluntary enlistment if practicable, by compulsory enlistment if necessary. An enrollment of all persons liable to military duty was ordered, and carried out by local boards consisting of a provost-marshal, surgeon, and commissioner. The necessity of rigid systematic medical examinations becoming apparent, in order that none but able-bodied men should be sent to the field, in January, 1864, a medical branch of the Provost-Marshal's Bureau was established, to give instructions to the local medical officers and to receive their reports, and Dr. J. H. Baxter, the author of the work before us, was assigned as its chief medical officer.

The value of the vital statistics accumulated under the supervision of the medical branch of the Provost-Marshal-General's Bureau was so conspicuous that Congress, in 1869, directed that the data should be arranged for publication. After a laborious analysis, the results are embodied in two large quarto volumes.

The first volume opens with an introductory chapter of eighty-seven pages, in which the plan and scope of the work are set forth, the recruiting regulations of the United States since the formation of the army, and those now in force in various foreign countries, are detailed and explained, and different systems of measurement of the human body and its relative proportions are fully discussed. Anthropologists will find the last section, which terminates with an excellent bibliography of works on anthropometry, an exhaustive review of the subject, enriched by many original observations and by much instructive criticism.

A review of the tabular statements embodied in the second volume follows. The terms employed are defined, and the classification of diseases, disabilities, and disqualifications explained. The well-known nomenclature of diseases provisionally adopted by the Royal College of Physicians of London in 1869 is employed, with some necessary modifications. The methods by which the elementary conditions selected for comparison are set forth are next described. These are: first, stature, including height, girth of chest, expansion of chest, and weight; age, complexion, nativity, residence, and marital relations. The voluminous tables are in all cases supplied with millesimal ratios, an arrangement of the utmost practical convenience, permitting ready comparison of the results by the ordinary reader, and an appreciation of the conclusions that without this aid could be easily attained only by the advanced statistical student.

The next part of the first volume, in sixty charts and eleven tinted maps, expresses graphically the principal results declared from the tables. By ingenious adaptation of the methods of late felicitously employed by statisticians,

the ratios and distribution of diseases and physical characteristics are summarily presented to the eye. Twenty-four charts show the relations of various diseases to social condition, complexion, age, height, and nativity; ten, the relation of diseases to occupation; twenty-four, with the further illustration of eleven maps, exhibit the distribution of diseases according to locality. Two charts are devoted to a comparison of height and girth to age and nativity. Among their instructive features these charts present some that are amusing. We are pained to observe, in Chart XXXIV., that, in disqualifying diseases, "editors" take highest rank. In "obesity," in the learned professions, "lawyers" take precedence, while "physicians" present a lean figure, and "editors" have no standing at all.

The next part, of three hundred and sixty pages, consists of reports of surgeons of boards of enrollment and other documents. It is probably well to preserve this documentary evidence, but its crudeness, diffusiveness, is in marked contrast to the remainder of the work. It is perhaps unfair to expect uniform reflections of matured wisdom from practitioners hastily called to engage in an unaccustomed pursuit, but we should hardly expect to find a surgeon-general of New York (page 259) asserting that hernia should not disqualify a man from military service, and that a medical officer should be able to examine twelve men an hour with accuracy.

The first volume closes with an exhaustive and well-arranged analytical index. The second volume is entirely occupied with the consolidated tables and necessary explanatory matter. Some of these we have examined with care, and can testify that they equally display the laborious fidelity of the computers and the good judgment with which the labors have been directed.

We understand that an edition of five thousand copies of this valuable work has been published, and that its distribution is reserved to members of the present Congress.

* *

ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY, BOSTON, JUNE 13TH AND 14TH.

THE society met at the Lowell Institute at eleven o'clock A. M. of Tuesday. The first paper presented was that of Dr. Albert Wood, of Worcester, on Embolism of the Arteries of the Extremities. The writer called attention to the differential diagnosis of embolism and thrombosis, and to the causation, prognosis, and treatment of the latter. The paper was based upon clinical observations made by the author.

Dr. William F. Southard, of Baldwinsville, read a paper on The Thermometer as an Aid in Diagnosis and Treatment of Disease. He gave the history of medical thermometry, and considered the employment of the instrument as of great value in the incipient stages of diseases like phthisis, where the physical signs are not sufficiently positive to enable the physician to arrive at any satisfactory conclusion as to the condition of his patient.

The Dietetics of Infancy were next considered, by Dr. O. J. Brown, of North Adams. The following statistics are valuable because from his own practice. In the three years from 1871 to 1874 he treated for diseases of the digestive

organs seventy-four cases in children under two years of age. Thirty-two of them were fed at the breast; and forty-two were brought up upon artificial food. Of those brought up on the breast, three died, two from convulsions following indigestion and one from intussusception. Of the forty-two fed by hand, nine died, all from causes traceable directly to artificial feeding.

Dr. J. J. Putnam, of Boston, called attention to some of the physiological and therapeutical relations of physical exercise. He referred to the Swedish movement cure, and to its advantageous employment in certain diseased conditions. Appropriate apparatus was shown for the restoration of power in muscular paralysis of various parts of the body.

Dr. F. F. D'Avignon, of North Adams, reported his favorable experience of the employment of the tincture of iodine in albuminuria resulting from congestion of the kidneys. He regarded the remedy as particularly indicated in cases of the disease in persons of strumous taint, in whom the malady is apt to be intractable.

The reports from district societies were read by Dr. Wigglesworth, of Boston. For the Suffolk district Dr. A. L. Mason presented a paper on the various remedies in use in this vicinity and abroad for the reduction of temperature in febrile conditions. The paper was interesting and instructive on account of the clear manner in which the action of and the indications for the various remedies were shown. Reports were also presented from Worcester, Bristol North, and Hampden districts.

Some points in the Pathology and Treatment of Cholera Infantum were forcibly presented by Dr. Edward Waldo Emerson, of Concord. The writer stated that the clinical phenomena of the disease in question demonstrate clearly that the main pathological condition is an entire change in the equilibrium of the circulation — engorgement of the abdominal organs at the expense of the peripheral and respiratory. After a careful consideration of the disease in its pathological relations, its treatment was discussed at length.

Dr. Marshall Calkins, of Springfield, in a vivid manner discussed the diet of the sick, and referred to the kinds of food that should be employed in various diseased conditions.

A paper on the Crepitant Râle, its Nature and Conditions of Production, showed much careful study on the part of its writer, Dr. William H. Workman, of Worcester. He concluded his paper with the statement that this râle is peculiar to no one disease, as was formerly supposed, but may exist in several, each having its distinct pathological nature.

The last paper of the day was a very instructive one on the Sanitary Condition of the City Hospital, by Dr. Edward Cowles, of Boston. The writer showed that recent investigations have exhibited such sanitary defects in the original plan of construction of the hospital as may account for much of the mortality from pyæmia and kindred diseases in past years. Sewer gases have penetrated the shafts which were designed to convey pure air to the wards, and, it is reasonable to suppose, have caused much sickness and death. It is hoped that the means now adopted will prevent such risks in the future.

In the evening of Tuesday the councilors assembled for the election of officers of the society, and for the transaction of other business. The following officers were elected for the ensuing year:—

President, Dr. William Cogswell, of Bradford; vice-president, Dr. J. W. D. Osgood, of Greenfield; treasurer, Dr. F. W. Draper, of Boston; corresponding secretary, Dr. C. W. Swan, of Boston; recording secretary, Dr. F. W. Goss, of Roxbury; librarian, Dr. D. H. Hayden, of Boston; orator, Dr. J. R. Bronson, of Attleboro; anniversary chairman, Dr. A. Hosmer, of Watertown.

The president announced a donation of one thousand dollars to the councilors, the income of which was to be devoted to providing refreshments at the times of their meetings.

An appropriate expression of thanks was unanimously voted to the retiring president, Dr. B. E. Cotting, for the ability and fidelity with which he had performed the duties of his office.

The society reassembled at nine o'clock Wednesday morning. The names of sixty new and of twenty-nine deceased fellows were read. The treasurer's report was of much interest, showing that all the debts of the society have been paid and that there is a current balance of more than three hundred dollars in the treasury. The society voted to join with others in a petition to Congress for appropriations sufficient to print the catalogue of the library of the surgeon-general's office in Washington.

Subsequently the reading of papers was resumed. Dr. J. Collins Warren, of Boston, presented a very valuable communication on Vaginal Lithotomy, in which the comparative merits of this method for removing a vesical calculus and that of dilatation of the urethra were discussed. The writer's conclusion was that vaginal lithotomy may be employed in a much wider range of cases than it has been hitherto, while dilatation of the urethra should be practiced with great caution until we more fully understand the class of cases to which it is suited, and have determined with greater certainty the limit to which it can be carried.

Next there followed a discussion on The Metric System; Ought the Profession to Adopt it? Dr. Samuel W. Abbott, of Wakefield, opened with a paper in favor of the establishment of the system by law. The adoption of the method was ably opposed by Dr. J. L. Sullivan, of Malden, and favored by Dr. T. B. Curtis and Prof. E. S. Wood, of Boston. At the conclusion of the debate the society voted to join with the Institute of Technology in a petition to Congress to establish the metric system by law.

At twelve o'clock the annual discourse was delivered by Dr. P. LeB. Stickney, of Springfield, on The Country Doctor; his Place in the Profession. The theme was presented in a very interesting manner, and at the close of the address the thanks of the society were heartily accorded to the orator.

The interest of the occasion was heightened by the presence, during the delivery of the discourse, of his Imperial Majesty, Dom Pedro II., Emperor of Brazil. The diploma of foreign honorary membership was presented to the emperor by the president, in accordance with the previous enthusiastic vote of the society, in concurrence with that of the councilors on the previous evening. The honor was gratefully acknowledged by the distinguished visitor.

After the introduction by the retiring president of his successor in office, the society adjourned to the Music Hall to enter upon the exercises of the

anniversary dinner, where, after the collation had been partaken of, the anniversary chairman, Dr. J. H. Mackie, of New Bedford, welcomed the Fellows in appropriate words, and to the toast, The Massachusetts Medical Society, called upon the retiring president, Dr. B. E. Cotting, to respond. He replied somewhat at length, and in the course of his remarks congratulated the brethren on the present condition of the society, that with effective by-laws, an energetic ethical committee, zealous and active executive officers, a promptly-paid and increasing income, freedom from debts, a considerable fund, — \$30,000, — increasing donations, renewed activity in all the districts, and greater harmony and *esprit du corps* among its fellows, it is to-day more prosperous, more popular, more respected, more of a *power* for good to the community and the profession, and more generally acknowledged as such, than ever before in its history." The president elect next responded briefly. Governor Rice responded for The Commonwealth; Dr. Stickney for The Country Doctor; Rev. Dr. Quint for The Clergy; Judge Bennett for The Legal Profession; Mr. W. F. Raye, of London, for Our Foreign Brethren; Dr. H. W. Williams for The Ophthalmological Society, and Dr. Jacob Bigelow expressed by letter his "earnest hope for the welfare and individual happiness and prosperity of the members of the Massachusetts Medical Society."

On the announcement of a toast on The Metric System, no one appearing to respond, a Fellow arose from the audience and said he believed he had found what the chairman was looking for, and read the following lines, written by another, which had fallen into his possession, entitled A Lament by an Old Fogey: —

"Hard *lines!* to form a *league* to take away
The only *rod* that stayed my aged *feet*,
To strip my very dwelling of its *ell*,
And turn its *yard* into the public street.

"And *scruple* not to rob me of my *dram*,
The sole supporter of my tottering state,
Now that my *gill* is gone and I dropped down
From *stone* to *stone* to scarce a *hundred weight*.

"My last *mile*'s done, my latest *pound* is gone,
No *ounce* of joy or hope is left me here.
I only pray that Heaven may scatter down
Some *grains* of mercy on the old man's *bier*."

THE ENGLISH VIVISECTION BILL.

THE question of regulating by law experiments on animals has of late excited considerable attention in England. That there should be some kind of legislation is perhaps not undesirable, though we think that both in England and in America physiologists are not given to cruelty as they certainly are on the Continent.

The affair has taken a rather unhappy form from having fallen into the hands of that excellent but most stupid and mischievous class, the "sentimentalists," who are always anxious to sacrifice society for the criminal, and man for the beast. A very absurd clause in the bill now pending is that forbidding

under any circumstances experiments on cats and dogs. That these animals even when unconscious should on no account be of use to science is one of those characteristic inanities which will warm the very heart of the sentimentalist. The title of the bill is offensive in itself, and, as our English exchanges point out, it is as improper to call it a "Bill to prevent Cruelty to Animals" as it would have been to call the "Anatomy Act" one "to prevent the robbing of churchyards" or "the desecration of the dead." The following extract from the *British Medical Journal* contains several amusing and well-taken points:—

"It seems a strange omission on the part of the framers of this bill to have attempted no definition or limitation of the term animal. As it stands, those who, as Professor Cleland puts it in a letter to the committee of our Association, swallow their oysters alive, propose now to make it criminal to scratch the tail of a tadpole, if it be for the purpose of knowledge; for it must be observed that nothing is criminal under this bill, as it is framed, unless it be done for the purposes of knowledge. To experiment on a live oyster with Cayenne pepper and vinegar is lawful for the sake of tickling the palate; but if the same thing be done for the sake of gaining new knowledge or disseminating old knowledge, it requires a license, and (since anæsthetics cannot be used) also a special certificate; and it can only be done in a registered place, under the supervision of inspectors, and subject to the wisdom of the police. Neither spaying, nor gelding, nor firing, nor the other various mutilations of horses, cattle, sheep, sows, and cats, are included in the provisions of this bill; nor any of the other mutilations by which the animal creation suffer more in a year at the hands of agriculturists and farriers than they have done from the hands of physiologists since the world began, are taken into account, as acts of cruelty. It will continue to be lawful to 'break up' a fox, to trap rabbits in a way that causes long drawn anguish, without let or license; but not to show a frog's web under the microscope, or to demonstrate the circulation in a flea. Lobsters may be boiled alive by the million, and, as epicures will have it, slowly, in water raised from a low temperature to the boiling point; but not so bacteria."

THE BOYLSTON MEDICAL PRIZES.

WE take great pleasure in calling attention to the advertisement of the Boylston medical prize committee which has appeared in our columns, announcing the award of a prize of three hundred dollars to Dr. W. Gill Wylie, of New York, for a dissertation on Civil Hospital Construction, and a prize of two hundred dollars to Dr. Mary Putnam Jacobi, of New York, for a dissertation on the subject, Do Women require Mental and Bodily Rest during Menstruation? We understand that both of these papers are of an unusually high standard of excellence, and as the subjects were very judiciously selected by the committee they will both without doubt be read with great interest by the profession. A dissertation on Hospital Construction, bearing the motto "*Mille mali species, mille salutis erunt*," was considered so excellent that the committee recommends its publication by the author. As

the rules by which the committee is bound do not permit the name to be disclosed, we trust the author will see fit to give the profession the benefit of his work.

The subjects for these annual prizes are always selected with the greatest care, and represent very fairly the points on which the profession need instruction; and as the premiums are very generous in amount, there is an opportunity for the employment of the highest talent.

The questions proposed for next year are as follows:—

(1.) Are epidemics and so-called contagious diseases necessarily dependent upon material agencies, acting through the stomach, or otherwise?

(2.) Athletic sports, training, violent exercises, etc., as now practiced by young men; their temporary or permanent influence on the health.

The following are the questions proposed for 1878:—

(1.) Antiseptic treatment. What are its essential details? How are they best carried out in practical form?

(2.) Diphtheria. Its causes, diagnosis, and treatment.

We trust there will be an active competition and that our own city will come in for a share of the honors.

MEDICAL NOTES.

—The treatment of cystitis by atropia enemata is the subject of an article by Wm. Semple, M. D., published in the *Virginia Medical Monthly* of June, 1876. Dr. Semple says that most of the cases of acute cystitis that have come under his observation have occurred in young girls with whom the menstrual function had not become regularly established, and the attacks have commenced soon after a menstrual period, and in unmarried women when the function, before its cessation, becomes irregular. He has not found occasion to resort to the introduction of instruments into the bladder for purposes of examination or treatment since he has adopted the method here recommended. This method consists in the administration by enema into the rectum of from forty drops to a drachm of a solution of sulphate of atropia (one grain to eight ounces of water), to which is added sufficient carbolic acid to prevent the formation of organic matter and the deposit of atropia. The dose is added to half an ounce of water for administration, and given twice in twenty-four hours. It uniformly and immediately arrests the frequent strangury and painful micturition, gradually checks the mucous and sanguineous discharges, and relieves the supra-pubic pain with the cystic inflammation. When the urine is alkaline, Mettauer's nitro-muriatic acid is given to correct it; and when it is so acid as to irritate, the acidity is corrected by antacid remedies, of which the bicarbonate of potash, with subnitrate of bismuth, is generally preferred, because of the tonic effect of the bismuth and its very soothing effect on the mucous surfaces of the urinary organs. When constipation exists, which is frequent, it is relieved as occasion requires, generally by the German *pulveris glycerrihæz compositus*, until the bowels begin to act regularly from the effect of the atropia, which generally soon results. Several cases are reported to illustrate the success of this method of treatment.

— During the last winter semester the medical students at the German universities were distributed as follows: At Vienna 830, Würzburg 548, Leipzig 428, Dorpat 353, Munich 347, Berlin 263, Griefswald 218, Graz 211, Zürich 197, Strassburg 191, Erlangen 161, Breslau 160, Tübingen 157, Bern 151, Königsberg 148, Bonn 123, Göttingen 123, Marburg 122, Freiburg 120, Halle 112, Heidelberg 87, Giessen 84, Basle 82, Jena 75, Innsbruck 69, Kiel 64, Rostock 36.

— We see in our English exchanges that Mr. Wickham Legg reported the investigations of a committee of the London Pathological Society appointed to inquire into the pathology of floating kidney. The report showed that these cases could be divided into two classes. In one, the kidney (when examined as soon as the abdomen was opened, and before the other viscera were disturbed) was movable under the peritoneum, not unfrequently for an inch upwards and downwards; occasionally to a much greater extent, as in one case where it could be moved in a circle, the diameter of which was eight or nine inches. In the other class, the peritoneum formed a mesonephron. Both classes merged insensibly into one another. We are inclined to think the latter form the more common, but do not find this point mentioned in the report.

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CLINIC.

[SERVICE OF DRS. GAY AND CABOT.]

Goitre. — S. A. D., a healthy young woman of twenty, entered the hospital January 18, 1876.

“The tumor was first noticed two years ago, a little to the right of the middle line of the neck. It has grown steadily since, and now extends from just behind the angle of the jaw on the right side to the clavicle below; laterally from the anterior edge of the left sterno-mastoid muscle across beneath the right sterno-mastoid to a point three inches posterior to it. Its vertical diameter is six inches, horizontal diameter eight inches. It is soft and elastic, with indistinct feeling of fluctuation. The trachea is deviated about one inch to the left.”

For almost two months electricity was regularly applied over the tumor without sensibly reducing its size, although the breathing, which was slightly embarrassed on entrance, became freer. Towards the end of March the patient finally decided to have it removed by operation.

March 25th. Dr. Gay operated as follows: An incision about five inches in length was made from a little to the right of the symphysis of the chin nearly to the sternum. Upon reaching the surface of the tumor it was found covered with greatly distended thin-walled veins. Its coverings were stripped and dissected back, the more important bleeding points being tied as they appeared. The upper portion having been freed, the tumor stripped out quite easily. The isthmus of the thyroid formed a pedicle which attached it to the trachea and was filled with large vessels. An aneurism needle carrying a

double ligature was passed through this, it was tied both ways, and the tumor then cut off. There was considerable hæmorrhage from the divided coats of the sac, which was controlled by pressure with the thumb until the vessels were tied one by one. The edges of the wound were brought together with silk sutures, and a dressing of carbolic acid and water 1x40 applied. She made a good recovery without an unfavorable symptom.

The ligatures about the pedicle came away on the tenth day, and three weeks after the operation she was discharged at her own request, with but a small granulating surface left. An examination of the tumor showed it to be simple glandular hypertrophy.

Displacement of Patella.—Charles H. E. entered the hospital November 16, 1875. He gave the following history:—

“Eleven weeks ago he turned his ankle and felt something slip about the knee. He examined it, and found the patella, as he thinks, displaced to the inside. He pushed on it and it went back into place with a snap. He then walked a mile with but little difficulty. The next morning he was lame, but could walk a little. Since then he has kept about on it more or less with the help of a crutch.”

At the time of entrance he could not lift his leg straight from the bed, nor extend the lower leg when flexed. A very marked depression was to be felt over the situation of the ligament of the patella.

The leg was put upon a splint originally contrived by James Mains, a ward tender at the hospital, for excisions of the knee-joint, but which has been found useful in various diseases and injuries of that joint. It consists of a straight under splint on which the leg rests, as on a Goodwin's splint, with bridges under the knee, and of an upper splint fitting the front of the thigh and leg with bridges over the knee. When these are secured together with straps, the leg is held very firmly. In this case the lower end of the thigh-piece was well padded against the patella, and being strapped firmly about the thigh was drawn down until it brought the patella well into place, and then secured to the foot-piece.

At the end of almost a month, during which time the parts had been kept immovable, there was no apparent effort at repair of the ligament.

December 16th. A blister was applied over the depression below the patella.

December 20th. There was a decided filling up of depression.

On December 26th a blister was applied, and again January 7th.

January 12th. The depression was filled with a firm resistant mass.

January 28th. There being apparently good union between the ends of the ligament, a dextrine bandage was applied and the patient allowed to get up.

February 14th. Dextrine was sawed off and the union found still apparently firm. He was discharged with directions to continue wearing the dextrine, but to take it off three or four times a day and work his knee gently.

The patient was seen again June 7th. The patella is in good position, the new ligament being no longer, though somewhat broader, than the other. He can walk upon it freely without limping, extends it when flexed, and can raise it straight from the bed.

A. T. CABOT.

MAINE GENERAL HOSPITAL.

SURGICAL CLINIC.

Elastic Ligature in Fistula in Ano. — S. D. P., aged thirty-three, admitted to hospital December 2, 1875, with a history of fistula in ano, the result of an abscess. It extends up along the rectum about two and one half inches; has fecal matter in it, but no communication can be found with the gut. General health rather below par; bowels quite regular.

December 3d. Dr. Tewksbury with a curved needle put in an elastic ligature.

December 12th. There has been but little discomfort since the operation. Ligature has cut through and the wound is granulating finely. To take gentian and cinchona.

December 25th. Wound nearly closed, general health much improved, and she is discharged. This is a typical case of several in which Dr. Tewksbury has used the elastic ligature. It is done without ether or incurring much pain, and the result is as good as by the ordinary method.

Stiff Knee. — T. C. B., aged twenty-one, admitted to the hospital January 21, 1876, with the history that on the first of September, while mowing, he slipped and fell upon the scythe, receiving a cut the depth of the scythe on the inner and upper third of the patella, reaching the quadriceps extensor tendon, but probably not severing all of it. He says the wound was brought together with adhesive straps; healed without much inflammation; that he was not confined to his bed, but that it was some two months before any weight was borne upon the leg, for fear of reopening the wound. The tissues about the knee are tense and unyielding; he can flex the leg but slightly, and in walking swings the foot outward, and limps. His general health is good.

Dr. Tewksbury ordered the limb to be rubbed and kneaded, and at the same time as much flexion made as could be borne for ten minutes at a time, night and morning.

January 28th. The tissues about the knee have loosened; he can flex the leg to nearly its normal extent, and walks very much better.

February 8th. There has been constant improvement; the leg can easily be flexed to its normal extent; he walks readily without limping, and is discharged with orders to continue the treatment a while. This case is very interesting, for it came from the hands of surgeons of good standing, who thought it would be a long time before the limb would become useful, if it ever did. It is also one of those cases in which persons employing the same treatment, and achieving such a happy result, attribute it to "spirits" and call themselves "spiritual doctors," or they soon find their pedigree will warrant them in styling themselves "natural bone-setters."

Ovariectomy. — L. D. M., aged twenty-five, single; occupation, teacher. Nativity and residence Mount Vernon, admitted to the hospital April 17, 1876. History is that of ovarian tumor, which commenced about ten years ago by a slight enlargement in the right iliac region. For four years it gradually became more prominent, when it took on a more active growth, which continued for three years, the tumor then occupying a large part of the abdominal cavity.

She has enlarged an inch or more at different times within the last three years. This always reduced her strength, which was never fully regained during the intervals. She never has been tapped, and has enjoyed very good health, although the weight and pressure have annoyed her very much. Her menstruations have been regular. Of late her health has been failing; she is much larger than a woman at full term of pregnancy, and the abdominal cavity is occupied by a distinctly circumscribed fluctuating tumor. She is very hopeful and desirous of an operation, and her courage is unsurpassed.

April 19th. She has been taking ten drops of tincture of the chloride of iron after meals, which she took under the impression that it was for a cathartic effect, and it has so acted with her.

She was kept on a light diet yesterday, and at bedtime she took six grains of blue mass, followed this morning by a teaspoonful of citrate of magnesia, hourly, commencing at five, till free evacuation occurred. Breakfast of milk.

The room she occupied was on the third floor of the main building, south-east corner, called St. Nicholas. It never had been occupied, and everything was new and fresh. The room adjoining was for the operation. It was light and well ventilated, with a fire-place in the centre of side wall, in which was made a wood fire and the temperature raised to 80° F., moistened with steam. No pains was spared to have things in perfect order and readiness. The sponges were new, had been beaten to get out the sand, and cleansed in permanganate of potassium. Hot water was ready to cleanse them in, and to warm the hands and instruments. She took an ounce of brandy a few minutes before etherization, which was done in the St. Nicholas room. She was conveyed to the adjoining room, and laid upon the table, and at 11.45 A. M., after drawing the urine, Dr. Greene proceeded to operate in the presence of Drs. Tewksbury, Dana, Hunt, Holt, and Gibson, by making a vertical incision three inches long midway between the umbilicus and the symphysis pubis. As soon as the incision was carried down through the rectus muscle it was enlarged to about five inches. When the supposed true sac was met, a steel sound was introduced and adhesions broken up, then a portion of the sac caught up by forceps, and Spencer Wells's trocar and canula introduced. Ten quarts of fluid came away. A ligature was then passed around the opening made by the trocar, and the sac, with the remaining fluid, removed. This sac completely peeled out, and for a moment it was somewhat a surprise to find it had no pedicle, but it was soon ascertained that this was the inner, secreting sac, and that the outer, vascular one remained attached by a long pedicle to the right ovary, from which it sprung and which it involved. The sound had been introduced between the two sacs, and there were no adhesions between the outer sac and the peritoneum, except at the point of incision for a radius of three inches. Silver wire was stitched through the pedicle in such a manner as to entirely surround it, and the sac with what remained of the ovary was then removed. The ends of the wire were turned in such a manner as to produce no irritation, and the stump returned to the abdomen. The left ovary was found normal. Hot sponges were used to cleanse the abdominal cavity of serum and blood, there being but very little of either lost during the operation. The wound was closed by deep silver and superficial horse-hair sutures, a compress of cot-

ton with a wide abdominal bandage applied, the patient put to bed, a foot bottle of hot water applied, and morphine ordered hypodermically *pro re nata*. There was very little vomiting during the operation, which occupied forty-five minutes, and the pulse ranged between sixty and eighty per minute. The fluid and sacs weighed over thirty pounds. The fluid was clear, slightly albuminous, alkaline in reaction, and had a specific gravity of 1010.

Ten p. m. Has been little restless, and morphine (gr. $\frac{1}{6}$) has been given. Catheter introduced, but no urine found.

April 20th. Fair rest during the night. Pulse 90, temperature 100° F. Eighteen ounces urine drawn. Eight p. m. Pulse 92, temperature 102°. Has taken but one fifth grain morphine to-day.

April 24th. There has been considerable pain in the bowels, with painful passage of flatus, though but little morphine has been used. Quite a free movement of the bowels has been obtained after an injection of warm soap and water, with salt and molasses added. Fair amount of urine has been drawn by catheter. Menstruation has commenced ten days earlier than it should. The pulse and temperature have not been above that recorded on the 20th inst. Tongue becoming coated, skin moist, milk diet continued.

April 28th. All the stitches were removed; union by first intention; very little suppuration along the edge of the wound. Adhesive straps put on, and compress and bandage reapplied. In addition to milk she is allowed chicken broth, dropped egg, and blanc-mange. Colic pains continue, and it is thought best to move the bowels. To take six grains of blue mass, followed in five hours by elixir of buckthorn, tablespoonful every two hours till a movement is obtained. Catheter has not been used for three days; there is some urethral irritation.

April 29th. The elixir was so objectionable to her stomach that it was given but twice, and an injection used, but no stool was obtained till to-day. Her rest was disturbed, and the physic has not worked kindly.

May 1st. The pulse has become accelerated, but temperature remains about the same, varying between normal and 102° F. Distention and tenderness in ileo-lumbar region. Morphine (gr. $\frac{1}{4}$) three or four times daily to relieve pain.

May 7th. The bandage and adhesive straps removed. Little pus on edges of wound. Oakum applied, to be changed as often as necessary. There was an uneven swelling of the abdomen, the most prominent point being in the ilio-lumbar region, and Dr. Greene thinks the pain and inflammation had its seat here, namely, in the stump of the pedicle.

May 14th. Since the last note the pain has gradually subsided, and morphine has been left off accordingly. The tongue has cleared up; appetite improved; the distention of the abdomen has subsided, the bowels have voluntarily moved, and she is able to sit up.

June 10th. She has suffered but slight pains since last note; has had an excellent appetite; walks about with ease; has ridden out and has got along nicely with her second menstruation, which came on four days since. It would be about the usual length of time, provided her first one after the operation had not come ten days early.

E. E. HOLT, M. D.

LETTER FROM ANN ARBOR.

MESSRS. EDITORS, — On page 615 of No. 21 of the JOURNAL is a letter from some correspondent who signs X. to his libelous article. A person who will not append his true name to an important article like this, containing, as it does, a charge that the medical faculty of the University of Michigan have betrayed the interests of their profession for salaries, and also a slanderous charge against the undersigned and other individuals, is hardly worthy of notice, and, were it not for the fact that you have by an editorial given respectability and prominence to his letter, I should not have written this. As I am an old resident of your State, and have many professional acquaintances and friends there, I hope you will publish at an early date this refutation of the falsehoods in your correspondent's letter.

In the first place I will say that I am prepared to show that the medical faculty have not sought to influence the action of the state society by any means other than a brief presentation of their position to the profession and a few arguments in its support; such arguments being confined by the vote of a packed society to five minutes for each speaker, all papers and communications from the profession touching this matter having, by the vote of this majority, been referred to a committee of nine, without reading and without debate.

2d. I will say that the members of the faculty present at that meeting *were* desirous of counsel from the society, but such counsel was refused, and when Dr. Pratt, chairman of the committee of nine, was asked in public debate if he would have advised the university medical faculty to resign when the homœopathic college was organized, he answered that he *would not*; and when a member of the faculty presented to him a set of resolutions asking the legislature and regents to eliminate sectarianism from the university, he would not entertain them, but brought in a resolution which virtually declared that regular medicine is what the homœopaths have always charged it with being — a sectarian system of medicine.

3d. I will say that my letter of resignation was not "couched in such terms that I was repeatedly called to order by members." I was not once called to order while reading it, and in proof that it was not indecent I will quote it here, that your readers may judge its import, and I will say that I am prepared to defend every expression it contains. The following is the letter: —

"To the Michigan State Medical Society: Since a resolution was adopted by this society on the 11th instant which, in my opinion, declares a purely commercial policy as its guide, and repudiates the ethical principle of the American code, which makes our profession a self-sacrificing, benevolent, and humane calling; and by another resolution the society has virtually declared regular medicine unworthy a position among the sciences, and also a principle which, fully carried out, would prevent the state from a proper care of the health and lives of its citizens, would abolish public medical care of the sick and insane, also all state and other boards of health, and carry our civilization in this respect back to the condition of the Dark Ages, I can no longer, consistently with my views of ethics, retain my connection with this society, and hereby tender my resignation of membership, and ask for its immediate acceptance or such other removal as it may please you to grant."

If you will recall the resolutions and consider them fully, you will see that my letter contains nothing but the truth. At any rate, I stand ready to support it by arguments, and not only that, but to show that those resolutions disregarded and violated several articles of the American code of ethics.

Now let me say that the university medical faculty have retained their positions in the university in accordance with the expressed wish of the Michigan State Medical Society.

In June, 1865, the following resolution was unanimously passed by the society :—

“ *Resolved*, That until such time arrives that the board of regents shall change the curriculum of the medical department, we are of the opinion that the professors thereof should continue to hold their respective chairs. But should such a change be accomplished as would directly affect the curriculum, we believe that, in honor to themselves and the profession to which they belong, and whose sympathies they receive, they could not consistently remain, and their resignations should be respectfully submitted.”

This is the only resolution the society has ever passed.

In June, 1875, some resolutions were introduced condemning the action of the faculty in retaining their places, but after a brief discussion they were laid on the table by an unanimous vote. At this meeting were present Drs. Pratt, Hitchcock, and most of those who, at the last meeting, disgraced rational medicine in the eyes of a large portion of the profession of this State.

That their unjust attack upon the university medical school was the result of a conspiracy, in violation of the American code of ethics, the following circumstance, I think, will plainly show.

The Michigan State Medical Society stands committed, to this day, to the principle on which homœopathy was introduced into the university, and they furnished the data on which the regents organized the school of homœopathy.

In your editorial you say you are “surprised and shocked to find certain medical journals advocating state examining and licensing boards.” Now let me *shock* you a little more with the turpitude of the Michigan State Society. For three years it has stood committed to use its influence with the legislature to establish a state board of censors, consisting of six physicians, to be chosen from among regular, eclectic, and homœopathic physicians, who should meet on equal and fraternal relations, and together examine and recommend all who may pass a successful examination (whether homœopath, eclectic, or anything else) as qualified for the full duties of physicians. Let me quote from the report of a committee appointed by the society to secure this law. This report was made at the June meeting, 1875, was accepted and adopted, and, on motion of Dr. Pratt, another committee of five was appointed to *continue* the work.

From this report, published on page 319 of the Transactions of the Michigan State Medical Society for 1875, I extract the following facts :—

That on December 16, 1874, this committee invited homœopathic and eclectic practitioners to meet and “*counsel*” with them as to the best law on the subject to present to the legislature; that they *did* so meet and *counsel* with an irregular practitioner, and together draw up a bill for presentation to the leg-

islature; that, owing to opposition to this bill, a further council was called for February 5, 1875, to which council, the committee report, "*medical gentlemen of all schools were invited.*"

On February 18, 1875, this committee inserted their amendments into what was then known as the "Thomas Bill," recommending five censors. The committee report that the object they kept in view was to frame a bill "free from the *suspicion* of favoritism towards medical sects and individuals," and that should make an "equitable selection of the members of the board from the three state medical societies" (eclectic, homœopathic, and regular). At the close the committee recommended to the society a continued effort to secure the law, and this recommendation was adopted.

It is to be borne in mind that this bill required the regular physicians on the board to license and recommend to public confidence all homœopaths, eclectics, or others who passed a successful examination in the branches common to all the schools of practice.

On the committee urging the passage of this bill was Dr. Pratt, who, as chairman of the committee of nine, insulted the medical faculty for occupying a position he had helped to force upon them. At his back was the Detroit Medical College faculty and a large number of disappointed candidates for positions in the university faculty. How shall we characterize such conduct by a body of professional men?

In your editorial you speak of the emphatic rebuke the society administered to the faculty by electing Dr. Sager as president. He was a fitting leader of that clique. I am prepared to show, whenever required to do so, that Dr. Sager never advised any one to resign, or hinted that he should do so himself, until some time after the arrangement was made. As dean and oldest member of the faculty it was his duty to give *prompt* advice in this matter.

The scheme of separate schools was an after-thought of his, he at first not objecting to the present arrangement, and only after an unpleasant personal interview with the president of the university did he resign, and lead the Detroit faculty in their charge on the university.

Being familiar with his conduct in this matter, I am confident that he has been actuated by a feeling less noble than love for the honor and dignity of our profession. Out of respect to his age these damaging facts have been heretofore withheld.

G. E. FROTHINGHAM.

ANN ARBOR, MICHIGAN, May 31, 1876.

BOOKS AND PAMPHLETS RECEIVED. — Medical and Surgical History of the War of the Rebellion. Part II. Surgical Volume. From the Surgeon-General's Office, Washington. 1876.

Hoarseness and its Causes. A Lecture by Clinton Wagner, M. D. New York.

Syphilis of the Nose and Larynx. (The same.)

Atlas of Skin Diseases. Part I. By Dr. L. A. Duhring. Philadelphia: J. B. Lippincott & Co. 1876. (For sale by A. Williams & Co.)

Medical Schools and their Relations to the Profession. By Joel W. Smith, M. D. (Extracted from the Transactions of the Iowa State Medical Society.)

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QUANTITY AND TENSION GALVANIC CURRENTS, WITH REFERENCE TO THEIR DIFFERING SURGICAL ACTION.¹

BY WILLIAM F. HUTCHINSON, M. D., PROVIDENCE, R. I.

OWING to the fact that experimental researches into this important subject are rendered impossible to a great part of the profession, by reason of want of the necessary time and appliances to carry them on, it remains for the specialist in electro-therapeutics to supply the blank — to show what difference exists, and how. For the specialist, who understands the great law of Ohm to be the foundation of his studies as the mathematician knows the primary rules of arithmetic to be his, a simple reference to this axiom, which is as demonstrable as is the binomial theorem, would be sufficient; but in order to render the practical application thereof plain to all, in the above connection, a series of experiments have been made, and the results thereof recorded in this paper. The astronomer and the microscopist are guided in the use of their instruments by well-known and thoroughly-understood physical laws, which have existed sufficiently long and have been sufficiently investigated to make them plain to even a school-boy; and so they have a beaten track to follow. But the worker in electro-physics has but one compass to guide him over unsurveyed seas, one well-founded law upon which he may fully depend; and this is of so small moment to other persons that its bearings and teachings are scarcely known or cared for. It is the polar star of electrical science, it is the foundation of electrical law. By carefully studying and closely following it, important mistakes must be avoided; should it be neglected, through ignorance or carelessness, it is impossible to predict what catastrophe may be impending. Let us recite the law.

It is, "The quantity of electricity passing any given point in a circuit varies directly as the electro-motor force and inversely as the resistance." That is, its volume increases with increase of propulsive power, and decreases with increase of resistance. This being understood, we must next define the technical term "electro-motor force." It is that quality which by means of tension overcomes resistance to current flow,

¹ Read before the Providence Medical Association, June 5, 1876.

and is exactly proportionate to the number of galvanic cells employed, without reference to their respective size. It is that force which drives forward the current and varies only with the number of pairs, the metals composing them, and the nature of the exciting fluid. There being no other factors in its composition, it follows absolutely that two pairs unequal only in point of size, no matter how great *this* difference may be, will originate precisely the same amount of propulsive force. Tension is originated by electro-motor force, and may be defined as that quality by virtue of which substances intercalated in the circuit are penetrated or traversed, they being susceptible of such passage, so-called conductors or electrolytes.

Quantity means the amount of electricity passing a given point in a given time.

It will therefore be seen that these two terms are not convertible, are distinct, and mean totally different things. It is by virtue of its quantity that galvanism heats the cautery-knife or wire, by virtue of its tension that it decomposes water or a portion of animal tissue interposed in its course. The platinum knife or wire is heated by the quantity current in precisely the same way as is a piece of iron placed upon a blacksmith's anvil and struck with a hammer. Motion, by its sudden arrest, is transformed into heat, simply assuming an allotropic form, in strict consonance with the recognized laws of force. The current, passing along the copper conducting cables, meets with practically no resistance until it reaches the platinum, a resisting medium, but not an absolute bar. In forcing its way amongst the particles composing the knife or wire it becomes heat, and the platinum is rendered incandescent, while the copper conductors remain cold or are but slightly elevated in temperature. Should the platinum wire be made longer or be replaced by a sufficient quantity of animal tissue, or, in other words, the resistance be made effective, the current flow is arrested, and none of the characteristic signs of electrical action are seen, such as elevation of temperature, evolution of gas, or evidence of decomposition. The enormous resistance offered by animal tissue is the reason why a current evolved by any single cell is not only insufficient to produce any surgical effect therein, but is sufficient to entirely stop the deflection of a quantity galvanometer needle interposed in such a circuit. When the human body, from hand to hand, is intercalated, there is no single cell known that can produce a current which will pass through it, as I recently proved by a test with Dr. Piffard's new caustic battery, which, although sufficiently powerful to maintain a broad platinum knife at a white heat for an hour, produced no sensation whatever when the poles were held in the hands.

The second surgical quality of galvanism, tension, is alone capable of decomposing animal tissue by resolution. Tension currents are obtained

by augmenting the number of pairs and decreasing their size, for, as we have seen, this quality is increased with the number of cells, without reference to their size, and to employ a series of the large ones would make the instrument cumbersome and costly, without adding to its value in any way. All the *quantity* in a series of this class is obtained from the first two pairs, the rest acting as intensifiers or drivers thereof. So we increase the electro-motor force and tension by increasing the number of cells, and the electrolytic batteries in use to-day are so arranged as to permit this number to be varied at the will of the operator without breaking the circuit or causing any shock. Tension currents, possessed in the highest degree of the power of penetration, are the only ones, both in accordance with the law of Ohm and in the light of actual experiment, which can produce any surgical effect upon animal tissues, since they alone possess sufficient electro-motor force to overcome such great resistance as even an inch of flesh interposes. The dissolution affected in this way is usually termed electrolysis, a word exclusively employed to denote the effect of tension currents. The French have a much better way of distinguishing between tension and quantity than we, calling them galvano-caustique chimique and galvano-caustique thermique,—better, since both will produce cautery effects: quantity by direct heat applied through incandescent metal, tension by chemical decomposition produced in a mass of tissue interposed in its flow. As Tripiér says, “By the galvano-caustique thermique the field of actual cauterization has been enlarged, by the galvano-caustique chimique that of potential cauterization.” Only chemical decomposition by galvanism, and not the results obtained therefrom, is properly termed electrolysis, for this is really the preliminary step of a process of which the final one is the surgical effect. The action of the current separates organic liquids into acids and alkalies, and electrolysis is done when this is over. These acids and alkalies, obeying their affinities, enter into new combinations, and it is by this second step, precisely the *opposite* of decomposition, that surgical results are attained. The electrolytic power of galvanism has never been employed alone except in medical applications, where the products of electrolysis are received by and retained upon moistened sponge or chamois skin covering the electrodes. It would therefore seem better to adopt *in toto* the French nomenclature, or, if this cannot be done, at least to have our own term so explained as to prevent its being again defined as “the passage of a large quantity of galvanic current from over a dozen square feet of excited surface of the plates in the battery.”

The instruments employed to measure quantity and tension are essentially different. In the first case the galvanometer is made of an astatic needle surrounded by a short, thick wire or band, offering small resistance; in the second, of the same needle, having the short, thick wire

or band replaced by a very long, thin one, with many turns, and since with increase in length of wire and number of turns comes increase in the delicacy of the instrument and increase of resistance, so a tension galvanometer cannot measure a quantity current, for the resistance of the long wire is so great as practically to stop it entirely.

Theory and practice are again one, the law of Ohm being supported by both, the current flow varying directly with electro-motor force and inversely with the resistance.

To measure the quantity of electricity produced by a very large and powerful single cell, *at the battery*, would require an instrument constructed with especial reference to that cell, since the resistance being very small the volume would be very large. But let a single inch of animal tissue be interposed between the poles and the volume then measured, and this instrument is useless, as we shall presently see. So much for theory; now for the experimental proof thereof.

Experiment I.— Battery used, single cell, alternate zinc and carbon plates, five inches by seven, twenty-eight in number. Exciting fluid, a saturated solution of bichromate of potash in a solution of sulphuric acid, one part to four. This instrument was in perfect order, having been successfully employed in several galvano-cautery operations since. The electrolyte was a square of beef, three inches in diameter, from the round of the thigh, and free from fat. The conductors were cables of pure copper wire, each five feet long, and containing one hundred strands. Flattened needles of steel were used as electrodes and were plunged into the beef so that their points were one inch apart. Into the intermediate space, and directly in the current track, was placed a thermometer bulb, and its observation intrusted to Dr. O. C. Wiggin. Temperature of meat 50° F., that of the room 78°. The plates were then immersed to the depth of five inches and allowed to remain six minutes. No elevation whatever of temperature was recorded by the thermometer, although directly afterwards one inch immersion of the plates heated to incandescence two inches of No. 23 platinum wire. No change was observable either in the color or texture of the beef.

Experiment II.— Battery used, Stöhrer's electrolytic series, as arranged by the Galvano-Faradic Manufacturing Company, of New York, composed of thirty-two pairs of carbon and zinc plates, one and one half by four inches. Of these but twenty were used, that being the number usually employed by me in ordinary surgical operations. Conductors were pure copper cables of ten strands, and the same electrodes as in the previous test. Temperature of cube of beef (fresh piece) 54°. The needles and thermometer being arranged as before, and battery immersed, in one minute the mercury stood at 68°, two minutes 70°, and in six minutes 90°. Circuit was then broken, and examination showed thorough destruction of tissue all around the negative pole, the

same to a smaller degree around the positive pole, and traces of decomposition throughout that portion in the track of the current.

Experiment III. — Battery same as in the last trial, and number of cells increased to twenty-eight. Four small steel negative needles were inserted into a fresh cube of beef, their points encircling the thermometer bulb in such manner that they were distant from it an inch, and the circuit completed by a single large, flat positive needle, inserted two inches from the others. Temperature of beef 55° . The plates were immersed, and in fifteen seconds the mercury marked 60° , in one minute 64° , two minutes 76° , three minutes 90° , four minutes 105° , five minutes 115° , and in six minutes 126° , when the current was broken. Upon removing the needles and examining the beef, it was found that not only was structural disorganization complete around both poles, but in every part of the current track between them. The last two experiments were accompanied by copious evolution of hydrogen gas, and a crackling, bubbling sound.

Experiment IV. — Battery same as in first test, except that the single cell was broken up into four, so as to increase by four times its value as a cauterizing battery. The same four negative needles were used as in the last experiment, and everything arranged exactly as before. Temperature of beef 60° , having risen slightly from the heat of the room. Battery fully immersed, and in one minute the thermometer marked 61° , in two minutes 62° , three minutes 64° , five minutes $64\frac{1}{2}^{\circ}$, and in six minutes 65° . The needles were then withdrawn, and a close examination of the beef failed to show any sign whatever of galvanic action.

Deceming these experiments conclusive, so far as surgical result was concerned, the next step was to measure the amount of electricity flowing through the resistance offered by an inch thickness of animal tissue, as accurately as possible, by means of quantity and tension galvanometers.

In making these tests I was aided by my young friend Mr. Arthur Webster, who has devoted considerable time and labor to the study of electro-physics.

Experiment V. — Battery used, galvano-caustic, single cell, fourteen plates, with fresh fluid. Galvanometer, a tension instrument from Chester, of New York, sufficiently delicate to show distinct needle deviation from a single quart Smee cell, after the current had traversed the resistance of the whole body, from hand to hand. Battery was fully immersed and circuit closed through the galvanometer, at the battery, with complete rotation of the aluminium indicator. It was then closed through one inch of beef, and the same result followed, the needle moving a little slower. This was repeated twice, and the great cell replaced by a four-ounce Grenet, with a single pair of zinc and carbon plates, one by four inches. Precisely the same rotation followed closure of the circuit, showing both cells to have possessed the same electro-motor force.

The tension galvanometer was then replaced by a similar instrument arranged for quantity, made by Thomas Hall, of Boston, and the great cell again immersed. Closing the circuit at the battery, the needle swung round to 48° on an arc of 90° , slowly falling, until in one minute it stood at 40° .

The plates were next removed from the solution, well washed in hot water, dried, cell refilled with fresh liquid, and circuit closed through one inch of beef, the same broad steel needles being employed as electrodes. *The galvanometer needle remained motionless.* The circuit was repeatedly broken and current direction reversed, but the needle made no sign; the resistance was complete, so far as quantity was concerned.

Experiment VI. — Battery used, Stöhrer's series, the same as before, with quantity galvanometer. Closing the circuit through the inch of beef no current was registered, although the crackling sound of gas evolution was plainly audible, and, upon removing the needles, decomposition was well marked around both poles.

With the last test the examination was concluded, and it seems to have demonstrated the facts that a quantity galvanic current is totally unable to produce any surgical effect upon so small a portion of animal tissue as an inch of beef, the resistance offered thereby being too great for the electro-motor force of any single cell to overcome, and, consequently, that this current should not be employed where chemical dissolution is sought; and, in the second place, that tension currents, from their great penetrative force, are alone capable of causing any chemical change in such an electrolyte as flesh.

As I have stated in a previous address, the solvent effect of galvanism upon hard tumors, such as fibroids, is regarded as injurious, since absorption of the products of decomposition cannot take place, from the lack of absorbents in such growths; and that, in my opinion, the sole result of such interference is the formation of foci of pus about the points of the needles used as electrodes. There is no doubt that the conducting power of living tissue is much greater than that of dead, on account of the warm saline fluids contained therein during life, which are by far the best electrolytes in the body, but it will be remembered that fibroids are but sparsely supplied with blood, and a few tests with the tension galvanometer proved that the beef contained sufficient fluid to render it an excellent conductor. I do not think there is any difference in that respect between a living fibroid, with its great density, and a dead piece of beef with its loose cellular structure filled with fluid.

I have been furnished by my friend Dr. J. W. Mitchell with the results of post-mortem examination in one case where this operation resulted fatally, and they, too, support fully the accepted theory upon the subject. He states that while the needle punctures were plainly visible in the tumor at the time of death, five weeks after the operation, and

although the tumor was not a true myxoma, but a fibro-cystic growth, and thus more susceptible to galvanic action than a more solid mass, there was not the smallest evidence of such action having occurred, either from the presence of pus or other evidence of chemical dissolution about the needle points or in the track which the current, had there been any, must have taken between them.

In this connection Morgan states, in his great work upon *Electro-Physiology and Therapeutics*, "In order to be decomposed by the galvanic current the individual particles of the electrolyte must be freely movable in all directions, so as to follow at pleasure electrical attraction or repulsion, and hence it must be a semi-solid, liquid, or gas."

If this be correct, and experience testifies to its truth, it follows that a hard tumor like an uterine fibroid is not a proper case for galvanopuncture; and I trust that the gentleman who published an article upon this subject in the *JOURNAL* for February 17th, of this year, will be satisfied that it is no longer "an open question whether the galvanic current (as used by him) has anything to do with the dispersion of uterine fibroids, or whether the same results would not be produced by the needle-punctures without the electricity," for I claim that the experimental results recorded in this paper demonstrate that in his cases, with his published method of using a single-cell battery, no current passed between the electrode points which was sufficient to produce the smallest effect of any kind whatever, and consequently that the punctures must have accomplished all that was done.

TRANSFUSION AND AUTO-TRANSFUSION.¹

BY C. S. MINOT, M. D.

THREE medical questions have excited general interest in Germany during the past few years: (1) military surgery, (2) avoiding the loss of blood in operations, and (3) transfusion, which has been very generally discussed, though with little result. Here physiological experiment proves more profitable than clinical observation, and the author turns to that.

He begins with the account of a simple experiment. If the vena jugularis of a small dog be connected by a system of tubes and canulæ with the carotid of a large dog, the blood of the large animal passes over into the smaller, which soon begins to struggle, but then becomes quiet, and the activity of the respiration is diminished. The large dog at first remains still, but the loss of blood causes after a short while a quivering of the muscles, the breath is drawn deeper and more rapidly.

¹ Abstract of a lecture delivered by Dr. Lesser before the Berlin Gynecological Society, December 1, 1874, and published in *Klinische Vorträge*, No. 86.

Somewhat later the cramps accompanying loss of blood begin. Meanwhile, in the small dog, the vessels are found swollen, and the eyes project. If the experiment be now interrupted, the smaller animal runs about, all right. The larger animal lies motionless, the flow of blood from the carotid has almost ceased. If the artery is closed, the head lowered, and the limbs compressed, so as to drive the blood from the extremities and the abdominal cavity to the central regions, the animal begins to breathe again, and if the carotid is then re-opened the flow of blood begins anew, continuing till death follows. Upon weighing the small dog it was found, after the experiment described, that its quantity of blood had been doubled without producing any immediate harm.¹

This large addition of blood does not produce extravasations, but remains for the greater part in the vessels, as shown by Worm-Müller. The arterial pressure is not, however, hereby increased, because the elasticity of the walls of the vessels is changed in a peculiar way; the capacity of the vascular system is thereby increased sufficiently to take up the extra blood without any rise of pressure. As the limits of this power of self-accommodation lie beyond the quantity of blood which might come into consideration in making a therapeutical transfusion, the fear of producing a dangerous rise in the pressure in the vessels by transfusion is unfounded, except, at most, in cases of certain diseases of organs in which any rise of the blood pressure might be followed by dangerous effects. The author makes other extremely important applications of this new discovery.

From animals whose blood has been doubled by transfusion, only a part of the blood can be recovered, and the animals *die* by bleeding *before the quantity of blood has reached the normal level*. If, however, the extremities be wrapped up in Esmarch's bandages and all means used to drive the blood towards the heart, the circulation recommences, and the pressure in the carotids, which was very low, rises again. In this way the life of the animal may be saved.

This method has been called auto-transfusion by the French, and seems destined to become of the greatest value, and has already been used with success, though not many trials have been made of it. The author enumerates the following indication for its use:—

(1.) Small loss of blood, before having recourse to transfusion, and before and after surgical operations.

(2.) In cases of anæmia, before and after operations by which a fresh loss of blood is unavoidable.

(3.) Operations requiring the inhalation of chloroform, in cases of anæmia, as the pressure of the blood is lowered by the influence of the chloroform, according to Lenz, Brunner, Scheinsson, etc.

¹ Cf. L. Lesser. Ueber die Anpassung der Gefäße an grosse Blutmengen. Berichte mathematisch-physische Sachsische Gesellschaft der Wissenschaften, 1874. This research was made in Professor Ludwig's laboratory in Leipzig.

(4.) It should always precede transfusion itself, especially in cases of loss of blood, as by it life may be maintained during the critical moment, which is often lost in preparing the instruments for the transfusion.

If the auto-transfusion suffices, it shows that a transfusion is unnecessary, and becomes in this way a good means of diagnosis.

The author then discusses the various forms of anæmia in their relations to the quantity of blood and its pressure.

In the author's experiments the transfusion was, of course, made with the natural blood. The principal danger in this case is that of coagulation or the introduction of air, which the author reduced to a minimum by using merely two canulæ, one for the artery and one for the vein, and connecting them by short bits of rubber tubing, with an intermediate glass tube. He recommends direct transfusion, and to avoid complicated apparatus. For indirect transfusion he considers a constant pressure of mercury, and adds that preliminary warming of the blood is unnecessary, as a cold temperature delays the coagulation, and Malgaigne, Polli, and Casse found no harm to be done by the injection of blood at the ordinary temperature.

Since the introduction of defibrinated blood diminishes the coagulability, transfusion with it must be rejected when there is a fresh wound, or escape of blood.

Transfusion is a means of saving life, the loss of which is imminent either from certain acute diseases, want of blood, or asphyxia of the tissues. It is evident that for man undefibrinated human blood is the best, but the blood of animals may be used when it has no poisonous influence on the system. It is desirable to find some animal which may be obtained more readily than lambs, and the proposal to try dogs is worth experiment.

Dr. Lesser ends his interesting and original lecture with a final recommendation of auto-transfusion.

EMBOLISM OF THE PULMONARY ARTERIES IN CONSEQUENCE OF THE APPLICATION OF ELASTIC BANDAGES TO THE LOWER EXTREMITIES (ESMARCH'S METHOD).¹

BY J. V. MASSARI.

THE bandages were applied after a confinement in which the patient, in consequence of placenta prævia, had become extremely anæmic, and was but insufficiently affected by restoratives. The symptoms of anæmia disappeared remarkably quickly, and returned again immediately, when, in consequence of violent pain, the bandages were twice loosened

¹ Translated, by H. P. Bowditch, M. D., from the Wiener medicinische Wochenschrift, 1875, No. 48, noticed in Centralblatt für die medicinische Wissenschaften, 1876, page 368.

This is an instructive commentary on the last article. — Eds.

for a short time. Their third removal, thirty-two hours after delivery, was followed by sudden collapse, dyspnœa, violent heart-beats, and death in two hours, in spite of a re-application of the bandages.

Clots were found in the pulmonary arteries of the third order, and similar ones in the varicose saphena veins. The author regards the bandaging as the cause of the coagulation, and considers its employment contra-indicated by a varicose condition of the veins. He also gives a caution against the too prolonged application of the bandages.

CASE OF SLOUGHING OF THE SCROTUM; RECOVERY WITHOUT CASTRATION.

BY DRS. I. F. GALLOUPE AND T. T. GRAVES, OF LYNN.

On the 29th of December last, F. B., twenty-one years of age, and in good health, while at work near a revolving shaft moved by steam power had his apron and pantaloons caught and entirely torn off. On examination it was found that the scrotum had been included with the clothing, and torn off entire as far as the inguinal canals; on the right side the wound extended somewhat higher than that point, the skin covering the penis was torn, and that of the perinæum stripped off back to the anus. The testes and spermatic cords were left uninjured, but completely uncovered.

It was thought best to replace the scrotum, hoping that a portion of it at least would not slough, which hope was not entirely disappointed. The only alternative seemed to be to remove the testicles, to do which all that would have been necessary would have been to cut the cords and secure the vessels. During the examination, and at the dressings subsequently, the testes were separated and laid upon the groins, to bring the wound of the perinæum the better into view. On the third day the scrotum had sloughed, except a piece about an inch and a half square upon the left side of the penis. The entire wound was dressed with cotton-wool soaked in an aqueous solution of carbolic acid, and no other dressing was used throughout the treatment. Healthy granulations soon covered the wound and testes; the spermatic cords began to shorten, and soon drew the testicles into contact with the external inguinal rings. The wound healed rapidly, the relic of the scrotum growing until the left testis was covered. The right one being still bare, it seemed as though it would be necessary to remove it. On examining the wound, however, on the 5th of February (the patient had not been seen for several days previously), it was found to have disappeared of its own accord, by escaping under the skin of the groin, and lay above the pubes. There it still remains, giving no discomfort or inconvenience whatever to the patient. The entire wound is now (February 27th) healed.

RECENT PROGRESS IN THE STUDY OF MENTAL DISEASES.

BY THEODORE W. FISHER, M. D. HARV.

DIAGNOSIS.

THE modern idea that insanity is always and only a disease of the brain has been wrought out in the last few years, until the various forms of mental disease are as thoroughly based on corresponding pathological changes as are the symptoms of disease in other organs upon their pathology. The exact relation between symptom and lesion is of course often obscure, as in other diseases, since our knowledge of cerebral physiology is imperfect, but recent research is every day throwing new light on the dark corners of the brain.

The first question of importance to be solved is whether insanity is dependent on one fundamental abnormal state or on many. According to Griesinger¹ there are two grand groups of symptoms, which represent the two most essential varieties of insanity. In one the disease consists "in the morbid production, governing, and persistence of *emotions* and *emotional states*, under the influence of which the whole mind suffers, according to their nature and form." In the other it consists in "disorders of the intellect and will, which do not any longer proceed from a ruling emotional state, but exhibit, without profound emotional excitement, an *independent, tranquil, false mode of thought* and of *will*."

Experience shows that the former condition of emotional insanity, in many if not in most cases, precedes the latter state of intellectual insanity, and is the cause of it when not cured or arrested. The different stages, rates of progress, and succession of phenomena in these two states constitute the different varieties of insanity. By a thorough practical knowledge of these forms "it is now possible to approach much more closely than ever to the problem of an anatomico-pathological knowledge and diagnosis of mental disease."² In the first group it is rare to find important organic alterations, while in the second they are almost constant. While it is confined to the primitive or emotional stage, insanity is quite curable; with the development of secondary symptoms it becomes incurable. The first group includes the forms known as melancholia, mania, and monomania; the latter, chronic mania and dementia.

Insanity may therefore be considered, theoretically, as one disease with two periods, in which the brain, like many other organs, is affected first functionally and then organically. But there are still other subdivisions which practically amount to separate diseases, since they may

¹ Mental Diseases, page 207.

² Griesinger, loc. cit.

continue for a long time without passing into any other form. As with other organs, the functions of the brain may be morbidly depressed or stimulated, giving rise to corresponding states of melancholia and mania. This depression and this excitement may be general or partial, and affect simply the emotions or involve also the intellect and will. The depression may result in a state of indifference and stupor (mental anæsthesia), or in a state of irritation in which all moral impressions are exquisitely painful (mental hyperæsthesia).

As emotional states tend eventually to affect the intellect and will, so states of depression naturally tend by reaction to pass into states of exaltation. The painful self-concentration of melancholia finds relief, at last, in a persistent excitement and exaltation of the will, with an increase of self-sensation and self-confidence. The motor side of the brain becomes affected in its turn, and irregular and extravagant action takes the place of perverted sensation. When any of the preceding states have become permanently established, we have, with a partial or complete subsidence of emotion, either organized states of delirium known as delusions or fixed ideas (chronic mania), or an obliteration of the intellect more or less complete (dementia).

PATHOLOGY.

As to the nature of the cerebral changes which correspond to the forms of insanity described we are still considerably in the dark. We know, however, that functional insanity, if the expression is allowable, is due to disorders of the cerebral circulation, and consequent excess or deficiency of nutrition depending on influences direct or reflex, and specially related to hereditary constitution or temperament. Dr. J. Batty Tuke, elaborating Skae's definition, says,¹ "Insanity consists in morbid conditions of the brain, the result of defective formation or altered nutrition of its substance, induced by local or general morbid processes, and characterized especially by non-development, obliteration, impairment, or perversion of one or more of its psychical functions."

The phenomena of insanity in its early stages cannot, however, be properly called functional, since lesions no doubt exist, which are evanescent, disappearing alike upon recovery or death. Fox in his recent valuable work² says there are four conditions which leave no trace: (1) changes in the quality of blood; (2) in quantity; (3) reflex irritation; (4) shock. It is in the early stages of mental disease that its true pathology is to be observed, the numerous changes seen after death in more chronic cases being secondary, not to the mental phenomena but

¹ Edinburgh Medical Journal, November, 1874.

² The Pathological Anatomy of the Nervous System. By Ed. Long Fox. With illustrations. London. 1874.

to early organic changes, once amenable to treatment. The nature of these changes can be known only by means of clinical observation, or in part inferred from the later or secondary lesions. Since "disease is nature's most delicate experiment,"¹ clinical observation has taught us the most. Dr. Thompson, of Bristol, England, discovered, by means of sphygmographic tracings, that persistent spasm of the arteries was one of the earliest phenomena in general paralysis.²

Authorities differ as to whether the vascular or the nervous tissue is first affected in insanity. Symptoms from both sources are so nearly contemporaneous as to be indistinguishable in point of time. Many cases seem evidently of vascular origin, as anæmia from hæmorrhage, hyperæmia from general plethora, and delirium from toxic conditions of the blood. On the other hand, shock induces a paresis of absorption and reflex irritation, a condition unfavorable to osmosis, apparently through their action on the nerve cells. We know little of the true mode of cellular action, but there is reason to believe that some forms of mental and nervous disease consist in a discharge of force, as in the "discharging lesion" of epilepsy, as J. Hughlings Jackson calls it. So in hyperæmia induced by brain fag, worry, or other moral causes, or in the "psychic intoxication" produced by sudden good news, it seems probable that the nerve cells first feel the influence of the exciting cause.

The mode of conduction in nerve fibres is of great importance in the study of cerebral physiology. Brown-Séquard's theory of a special fibre for each kind of impulse transmitted is a complex one. Every complete nerve, he claims, must have at least eleven kinds of fibres. But this view is negatived by the fact that after union of severed nerves these various functions are carried on as well as ever. It is improbable that each fibre should unite only with one of its own kind. So, too, a sensory nerve may be made to unite physiologically with a motor one.³ The theory of Dr. Robert McDonnell⁴ is much more simple. He thinks that the peripheral expansions of sensory nerves are able to take up undulations or vibrations and convert them into waves capable of being transmitted along nervous fibres; so that the same nerve tubule may be able to transmit vibrations of different character and giving rise to differing sensations. The idea of heat and the idea of contact may be excited by the different character of the waves propagated by the same nerve-fibre. So in the optic nerve the undulations exciting the idea of red or of blue may pass along the same course, differing only in rate. This corresponds with what we know of sound as conducted through different media, the pitch depending on the rapidity of the sound waves,

¹ Fox, page 5.

² Fox, page 177.

³ Philadelphia Medical Times, January 8, 1876.

⁴ Lectures and Essays, Part II., page 220, Dublin, 1875

and it is certain the auditory nerve must be adapted to taking up these varying sounds and to transmitting the essential characteristics of each. By the same theory ideas of differing nature may traverse the same or perhaps any fibres, and thereby be reflected or spread, as it were, in any direction.

Cerebral hyperæmia is an early and constant symptom in all forms of insanity. Clinical observations show this fact, which is not disproved by the negative results of some autopsies, since emptiness of the capillaries after death does not prove that they were not distended during life. Dr. Fothergill remarks² that "there are two factors in the production of localized hyperæmia: (1) an increase in the blood pressure generally, the vascular factor, and (2) a change in the tissues themselves, by virtue of which they attract more blood; this is the tissue factor." He is inclined to attribute modifications of function to some unknown cause other than disturbances of vaso-motor and vaso-inhibitory centres. He mentions three forms of cerebral hyperæmia: that of vascular origin, encephalic fullness without general vascular excitement, and that produced by drugs. It is the second form which is usually present in mania, and the hyperæmia is no doubt as often due, primarily, to augmented cell activity inducing excessive vascularity, as the reverse.

Where the hyperæmia has disappeared after death, its recent presence may be inferred from sub-arachnoid hæmorrhages, minute aneurisms, and crystals of hæmatoidine. Dr. Tuke in his *Morrisonian Lectures* mentions the following changes which he has observed in the cerebral vessels, in one hundred cases of insanity, mostly chronic: (1) simple dilatation; (2) exudation; (3) opacity of the hyaline membrane; (4) dilatation of the retaining canal; (5) hypertrophy of the muscular coat.

Delirium. — Dr. Fox² thinks delirium is always due to loss or perversion of function from deficient blood supply. It is most frequent in anæmic conditions from exhausting disease. In toxic states of the blood the deficiency is due to part of the blood being useless for nutritive purposes, and in hyperæmia to pressure which renders interchange of elements difficult. *Delirium tremens* is due, he thinks, to the products of the decomposition of alcohol, which may accumulate in the blood for some time after the deprivation of liquor. The convulsions of alcoholism and uræmia are so similar as to suggest similar causes.

The idea that in all irregular nervous action there is deficiency of function from deficient nutrition is insisted on by Dr. Fox³ in his *Introduction*. He says, "Not only are rigor, tremor, spasms, convulsion,

West Riding Reports, 1875, page 173.

Fox, page 159.

³ Fox, page 3.

mere varieties of the same condition, but they are closely allied to incoördination, and through it to paralysis. The same may be said of the connection of excitement, delirium, and mania with dementia, fatuity, and coma." As a rule, excited and irregular action of any nervous centre is due to the removal of the inhibitory or controlling action of a higher centre.

Mania. — It is impossible to draw distinctive lines in the pathology of the early stages of insanity, so that the description of morbid appearances in mania will answer nearly as well for acute melancholia. This would follow naturally from the fact that the two forms are but different phases or stages of the same disease. In mania as in delirium the vascular system is especially affected. Greiding found the choroid plexus normal in but four cases out of one hundred in mania, and in sixteen out of two hundred and sixteen in cases of insanity generally.¹ The hyperæmia of the cortex may disappear at death, but can often be inferred from its results, such as extravasations into the pia mater, minute aneurisms, dilatations of vessels, diffuse encephalitis, etc. A lesion not constant, but rather characteristic of acute mania, is inflammatory softening of the middle layer of the cortex. Lockhart Clarke and others have described eight layers, but the division into three is in accordance with the arrangement of vascular branches. It is this red softening of the middle layer which allows the superficial layer to peel off, as it is so often seen to do, leaving the appearance of a ragged ulceration of the cortex. This softening, or rather the hyperæmia which precedes it, Dr. Fox thinks, accounts for the incoherence or loss of sequence of ideas in mania. A rapid flow of ideas with loss of association, or a jumping from one to the other, is very characteristic of acute mania, and may be reasonably referred to hyperæmia of the middle layer of the cortex.

General Paralysis. — Dr. Thompson's sphygmographic observations, already referred to, show that the vascular system is early affected in general paralysis. The period of persistent arterial spasm is the one in which alone treatment can be of any avail. The use of calabar bean seems to be indicated by this symptom, since it lowers the arterial tension. The writer has found a slow and tense pulse in the early stages of other forms of insanity; in acute mania and melancholia and hysterical mania, for instance. Recently, in a case of recurrent mania, the patient having sought advice at the first warning of a return of the attack, the pulse was but 38 per minute, and this in a man who had been in excellent health for a year.

The cause of this arterial tension in general paralysis has been sought in the sympathetic ganglia, but its pathology is not well understood. The mania in this disease is probably due to hyperæmia of the middle

¹ Fox, page 198.

layer of the cortex, as red softening of this layer, followed by hardening and atrophy, is frequent. The morbid appearances found in the later stages of general paralysis are numerous, but comparatively unimportant because secondary and common to some other forms, senile dementia, for instance. They have been described by many observers.¹

The lesions observed in other forms of chronic insanity are also numerous. W. G. Balfour records over eighty forms of abnormality or lesion in seven hundred post-mortem examinations.² Any one who will take pains to go through an asylum for the insane, taking shapes of heads with the *formateur* of the latter, will be astonished at their small size, want of symmetry, and other irregularities, as compared, age for age, with other heads whose owners are accounted sane. It is believed that the hereditary element is often handed down in the shape of the cranium.

The conclusions upon the average weight of brain in the insane are summed up by Dr. Fox briefly as follows:³ (1.) The weight of the whole brain is somewhat less in the insane than in the sane. (2.) The weight of the cerebellum, pons, and medulla is rather more in insane males than in the sane. (3.) Therefore the loss of weight is at the expense of the cerebrum. (4.) The weight of brain does not always bear an exact proportion to the intellectual power. (5.) The depth of the gray matter should be taken into the account. (6.) No particular disease except idiocy is associated with a light brain. (7.) Dr. Bucknill finds an average lower specific gravity in the brains of the insane, due possibly to a kind of fatty degeneration without diminution of volume.

Some of the lesions of vessels have been mentioned. Dr. Take found also (1) molecular pigmentation and fuscous degeneration of the nerve cells, (2) atrophy, (3) hypertrophy with an inflated condition. Dr. Grey, of Utica, from a microscopic examination of fifty-two cases concludes that the vessels are first affected.⁴ Syphilitic disease of the vessels has been described by many observers of late.⁵ In dementia, secondary to mania, an increased amount of peri-vascular protoplasm, and growth of interstitial connective tissue are usually found.

LOCALIZATION.

It is certain the cortex is the seat of lesion in insanity, since no extensive disease of it has ever been observed without mental derangement or weakness. Lesions of the membranes or convolutions are

¹ See Archives de Physiologie, Mars et Avril, 1875.

² Fox, page 190.

³ Fox, page 189.

⁴ American Journal of Insanity, 1874.

⁵ Take, Journal of Mental Science, January and October, 1875; Clouston, Edinburgh Medical Journal, July, 1875; Stedman and Edes, Journal of Mental Science, April, 1875

almost invariably found in chronic cases of insanity, and where examination is possible in recent cases, indications of hyperæmia or diffuse inflammation of the cortex abound. It is also nearly certain that the anterior convolutions are affected in those forms involving especially the intellect and will; while the posterior convolutions suffer in emotional forms. The belief has long prevailed, though on rather insufficient anatomical grounds, that the motor and sensory tracts were related through the corpora striata and thalami optici, with the anterior and posterior parts of the cortex. The proofs of this view accumulate under the labors of Ferrier¹ and his collaborators. They are also strengthened by the clinical observations of Hughlings Jackson and J. Crichton Browne.²

The phenomena of hysteria have an important bearing on this question of localization. In the hemiplegic variety especially, modifications of cutaneous sensibility and of temperature are often associated, anæsthesia with pallor and coolness being followed by hyperæsthesia and a rise in temperature, with redness and local perspiration. These disorders of sensation are probably due to irritation affecting the optic thalamus of the opposite side. Uspensky³ has localized a vaso-motor centre in this immediate vicinity. The mental symptoms may naturally be referred to those posterior convolutions most nearly associated anatomically with the thalami.

This view seems to be confirmed by the fact of the frequent occurrence of pain or distressing sensations in the back of the head in nervous and emotional cases. In females, cerebral exhaustion is often indicated by obscure pain in this region.

Hypochondriasis in the male, which is the analogue of hysteria in the female, has by inference a similar location. Careful observation of cases of this class, whose most prominent feature is morbid perversion of feeling and of general and organic sensation, points directly to a location in the sensory tract, including the higher or emotional centres.

The exceedingly instructive lectures of Dr. Broadbent on the Theory of the Construction of the Nervous System⁴ should be carefully read by all interested in this question of localization. By the aid of recent researches he is enabled to locate the centres of general sensation in the optic thalami; here impressions are transmuted into crude sensations. The perceptive centres are in the convolutions to which radiate each kind of sensory fibres, each perception having its special seat. For instance, the visual perceptive centre is in the angular gyrus around the end of the fissure of Sylvius; the auditory near the apex of the

¹ Experiments on Sense Centres in Monkeys, *British Medical Journal*, August 28, 1875.

² On the Functions of the Thalami Optici, *West Riding Reports*, 1875, page 227.

³ Virchow's Archiv, 1866.

⁴ *British Medical Journal*, March, April, etc., 1876.

temporo-sphenoidal lobe. The perceptive centres are bilaterally associated with those of the opposite hemisphere through the corpus callosum. The ideational centres, on the contrary, occupy the superadded convolutions (*i. e.*, peculiar to man) which receive no converging fibres from the thalami, and are not bilaterally associated with those of the opposite side.

The transmission outward of the results of intellectual operations is from the superadded convolutions to the motor centres of Hitzig and Ferrier, thence to the corpus striatum and downwards to the cord.

In all gross lesions of the brain the localization of function would be aided by a use of Machlan and Stewart's charts of the convolutions. A correct knowledge of the distribution of vessels is also important, as few anastomoses are found between branches of the cerebral arteries. M. Duret¹ has made a careful study of the branches which supply the cortex, and finds that the anterior cerebral supplies the gyrus and sulcus rectus and the olfactory bulbs, and then divides into (*a*) anterior, (*b*) middle, and (*c*) posterior internal frontal branches. The artery of the fissure of Sylvius gives out four branches: (*a*) inferior external frontal, (*b*) anterior, (*c*) middle, and (*d*) posterior parietal. The three branches of the posterior cerebral are the anterior and posterior temporal and the occipital. Dr. J. H. Jackson thinks that in epilepsy the nervous discharge is limited to certain areas of arterial distribution.

EXPERIMENTAL PHYSIOLOGY.²

No better proof can be given of the great progress recently made in experimental physiology than the appearance of the volume before us. The object of the author is to furnish a complete manual of all the technicalities of physiological experimentation, thus enabling the special student to undertake an investigation with a full knowledge of the methods best adapted to attain the end he has in view, and furnishing the teacher of physiology with a series of demonstrations suited to convey to his audience a knowledge of the experimental basis on which this science rests. Both in the range of its subjects and in the minuteness of its details the work is far superior to Sanderson's excellent Handbook for the Physiological Laboratory, which is the only other book with which it can be compared.

The first chapter contains general directions for experiments on animals, directions which Professor Cyon's well-known skill and success as an operator well qualify him to give. On the subject of vivisections two of his rules are well worth quoting:—

‘I. Never proceed to a vivisection without having first proved the impossi-

¹ Archives de Physiologie, 1874.

² Methodik der physiologischen Experimente und Vivisectionen. Von E. Cyon. Mit Atlas. Giessen und St. Petersburg. 1876.

bility of attaining the desired object (especially in demonstrations) in any other way.

"II. When not altogether inconsistent with the nature of the experiment, always produce a preliminary narcotization (by chloroform, chloral, opium, etc.)."

The author condemns, in the most unqualified manner, a hasty and careless style of vivisection, and concludes his excellent advice as follows: "Always operate on animals as if after the vivisection they were to be kept alive under the best possible conditions." This chapter contains also valuable directions for the choice, care, and feeding of animals destined for experiments.

In the following chapters are found detailed descriptions of an immense variety of experiments illustrating thoroughly the physiology of the circulation, respiration, and secretions, and the functions of the nerves and muscles. An atlas of fifty-four plates renders these descriptions perfectly intelligible, and indeed, by the clearness and minuteness with which complicated apparatus is figured, seems often to make a descriptive text unnecessary.

The methods of studying the physiology of the organs of sense and of psycho-physical research will be described in a second portion of the work, which is promised in the course of the current year. B.

RHODE ISLAND MEDICAL SOCIETY.

THE sixty-fifth annual meeting of the Rhode Island Medical Society was held in Franklin Lyceum Hall, June 14th, at ten o'clock. Dr. George W. Jenckes, of Woonsocket, president, in the chair.

The report of censors and records for last annual and quarterly meetings were read and approved.

Dr. F. H. Peckham, Jr., treasurer, presented and read his annual report, which was received and ordered on file. Receipts, \$416.12; expenditures, \$421.18; reduction of debt, \$45.94.

Dr. F. L. C. Garvin, for committee on publications, reported that four hundred copies of papers read before the society and proceedings at meetings had been printed, at a cost of \$140.25, and were ready for distribution at this meeting. Report was received, and treasurer directed to distribute the same, one copy free to each fellow and additional copies at fifty cents each.

Dr. W. E. Anthony, for the special committee in the case of Dr. Thomas Mathewson, accused of practicing abortion, made a report, including the report of the censors on the case, recommending his expulsion from the society. Report was received and adopted.

On motion of Dr. Mann to expel Dr. Mathewson for violation of the rules of the society, a vote was then taken, and Dr. Mathewson was expelled by a vote of more than two-thirds of the fellows present.

Dr. W. E. Anthony, delegate to the annual convention of the American Medical Association, at Horticultural Hall, Philadelphia, Tuesday, June 6th, read a written report of the meeting, with a brief digest of its proceedings, which was received.

The president invited delegates from other medical societies to take eligible seats and participate in the proceedings of the meeting, cordially welcoming all visiting delegates. Dr. Samuel Lilly of the New Jersey, Dr. William A. Lewis of the Connecticut, Drs. Robert T. Edes, D. Homer Bachelder, Chauncey A. Wilcox, and George W. Snow of the Massachusetts societies were severally introduced, and spoke briefly for the societies they represented and warmly expressed their thanks for their cordial welcome.

President Jenckes read a letter from Dr. M. Wedgewood, appointed delegate from the Maine Medical Society, excusing his absence from this meeting, and inviting delegates from this society to attend the annual meeting of the Maine society to be held at Portland.

Dr. S. A. Arnold, secretary, read the annual report of the trustees of the Fiske fund, which was received and ordered to be recorded. The report shows a balance in the hands of the trustees of \$1242.64. The trustees make no awards of premiums on the subjects offered for essays last year. For the best dissertations on the following subjects, or either of them, the trustees offer the premium of \$200 for this year:—

First. What is the best means, civil, social and medical, that can be used for the prevention of disease?

Second. The causes and nature of cerebral disturbances, so frequently occurring, especially those following active mental exercise.

The trustees present their annual fees to the printing fund, to be used only for printing the prize dissertations, or to increase the printing fund.

Dr. W. O. Brown stated that the State Board of Pharmacy, which was chartered by the general assembly, upon the petition of this society, six years since, had become a very useful and successful institution, and should receive recognition and encouragement from this society. He presented several copies of the annual report of the State Board of Pharmacy for 1876. The report shows that there are eighty-four registered pharmacists and thirty assistant pharmacists in the State, and expresses the satisfaction of the board with the successful and harmonious working of the law since its enactment six years ago, and the beneficial effects resulting therefrom.

The report of the board of censors was read by the secretary, received, and ordered recorded. Request of Dr. J. Laing Clark to resign his fellowship, recommended by the censors, all dues being paid, was granted by the society. Petition for expulsion of a member was continued to next meeting. The board nominated Drs. George L. Collins and James H. Eldredge for delegates to the International Medical Convention to be held in Philadelphia, September 6th.

Report of board upon charges made against Dr. Thomas Mathewson, of Providence, was amended and adopted.

Dr. S. S. Keene was appointed anniversary chairman for next year.

The annual election of officers was then proceeded with, and the following-named candidates were elected officers of the society for the ensuing year, after Dr. Jenckes had been re-elected president and declined: President, Dr. Edwin M. Snow, Providence; First Vice-President, Dr. Charles H. Fisher, North Scituate; Second Vice-President, Dr. Edward T. Caswell, Providence;

Recording Secretary, Dr. Walter E. Anthony, Providence; Corresponding Secretary, Dr. Edward M. Harris, Providence; Treasurer, Dr. Timothy Newell, Providence (Dr. F. H. Peckham, Jr., declining a reelection); Board of Censors, Drs. Ariel Ballou, James H. Eldredge, George Baker, Otis Bullock, Sylvanus Clapp, Welcome O. Brown, David King, J. W. C. Ely.

Dr. O. C. Wiggin, delegate to the annual meeting of the New Jersey Medical Society, reported briefly upon various medical questions discussed there, and of the fraternal attentions received, which made his visit a very pleasant one.

Dr. O. C. Wiggin then delivered the annual address before the society upon the subject of The Causes of Discrepancy in Medical Testimony given in the Courts of Law. The paper of Dr. Wiggin was an able presentation of its subject, showing the difficulties that attend medical and other expert testimony when given in courts, and that discrepancies must exist in such testimony in the very nature of things.

On motion of Dr. C. Parsons the thanks of the society were voted to Dr. Wiggin for his able paper, and a copy requested for publication.

On motion, the meeting then adjourned to the Horse Guards armory to partake of the annual dinner.

The Annual Dinner. — About half past two o'clock, soon after the adjournment of the business session, nearly a hundred fellows of the society met at the Horse Guards armory and sat down to their annual dinner, furnished by Café St. George, with an excellent bill of fare, to the order of the dinner committee, and devoted an hour to a very pleasant experimental discussion of the food question, with practical illustrations, and with good digestion waiting on appetite.

Dr. George L. Collins, anniversary chairman, presided, and called the company to order, while Rev. Carl W. Ernst asked for the divine blessing upon the feast, which all were then invited to partake of, and which they soon properly and very satisfactorily disposed of, each and all pronouncing it a very good "diet" for the occasion. Dr. Collins acted as toast-master.

MEDICAL NOTES.

— The following is an extract from Dr. Holmes's address at the recent public meeting in favor of a park:—

"You will not ask for rhetoric or eloquence in the few remarks upon a vital subject to be offered you by a member of the silent profession. What could be so eloquent as the hollow voice which announces the Boston annual death-rate as being 26.18 against 23.7, that of the great paved nation of London; against 19.3, that of Philadelphia, and approaching that of our two unhealthiest cities, New York and New Orleans? This high death-rate has been shown to be largely due to the excessive mortality among infants and children under five years of age. The most fatal of the diseases which assail them is that destruction which wasteth at noonday, to which our American practitioners give the name of cholera-infantum. And this disease prevails chiefly, almost en-

tirely, from June to October, the season when all out-of-door influences are most tempting and most needed. The weekly record of August and September is that of a pestilence. The destroying angel carries off the first-born, and oftener still the last-born, out of almost every household in certain districts, as in the heaviest curse laid on Egypt. Thousands have fled the city as they deserted London in the season of the plague, but thousands are left to follow in the funeral procession of those who were the hope of their households.

"A considerable part of this mortality, it may be feared, is unavoidable. Our climatic influences are permanent factors, and must always count in the bills of mortality. But there are certain agencies which we can, to a great extent, control. We can and do submit the dwellings of our citizens to inspection and sanitary regulation; we can and shall provide our city with proper drainage; we can and do inspect the food in our market, and condemn it if unfit for use; we can and must secure for our citizens the influences of unroofed and unwallled nature—air, light, space for exercise and recreation, the natural birthright of mankind.

"Of the uses of these larger breathing-spaces which we call parks, for the relief of the imprisoned dwellers in crowded streets, for the recreation of poor and rich alike, for the health of mind and body which they offer to all, it seems almost needless to speak from the medical point of view, for all know what cities would be without open areas where children can play in the shade and old people warm themselves in the sun. I wish to call your attention to a single point intimately connected with the alarming fact of the excessive death-rate of which I have spoken. That point is the influence of the air they breathe on the health of children, with the bearing of this on the question before us.

"If a child is found to have been starved to death in a cellar or an attic, a cry of horror is raised over it. If two or three wandering boys, as it happened the other day at Lowell, come upon some noxious roots, and, in obedience to their omnivorous instinct, devour them and pay the forfeit, the whole country hears of it. If a family or two get hold of some ill-conditioned meat and suffer for it, the groans of their colics are echoed all over the land. If a milkman misrepresents his honest cows by falsifying their product, the chemist detects him and the press puts him in the pillory. If the Cochituate or Mystic water is too much like an obsolete chowder, up go all noses and out come all manner of newspaper paragraphs from 'Senex,' 'Tax-payer,' and the rest. But air-poisoning kills a hundred where food-poisoning kills one."

—At a recent meeting of the Société de Chirurgie, as reported in *La France Médicale* of May 13, 1876, M. Depaul reported a case of cancer of the testicle in an infant of ten months. When eight months old the child, of healthy appearance, was brought to M. Depaul. He then had a cylindrical tumor, solid, situated in the left of the scrotum, continuous with the cord and therefore appearing to lie in the left testicle. It was three centimetres long and two broad. The skin over the testicle was movable, and there was not any effusion into the tunica vaginalis. The diagnosis being doubtful, M. Depaul treated the tumor with resolvers. The infant continued to thrive. He showed no signs of pain, not even when the tumor was touched. One day

the skin of the scrotum became red and adherent to the tumor at one point. Later an abscess discharged at this point, and there remained a fistulous opening, which, gradually enlarging, permitted the protrusion of nearly a third of the tumor. On consultation with his colleagues M. Depaul determined to operate at once. Castration was performed without anaesthesia. It was easily done, the cord being rapidly cut through with the *écraseur*. There was no hæmorrhage. The age of the child at this time was ten months. Fifteen days later the cicatrization of the wound was nearly complete. The tumor, examined immediately after the operation, showed a wrinkled surface in the protruding part, but it was smooth on its upper aspect. On section it showed a yellowish-white tissue, of which the scrapings gave a cancerous juice. On microscopical examination it was shown to be of a cancerous nature, but of a mixed variety. It was sarcomatous in a portion of the tumor, but for the most part scirrhus.

— *The Medical Press and Circular* states that the *Paris Médicale* discusses the treatment of obesity by the administration of sea-water combined with a residence at the sea-side. Sea-water, taken internally, acts like diuretic and purgative salts, a remarkable fact being that the diuretic effect increases when the purgative diminishes. The water should be obtained, when possible, from some depth, and far from the shore. It is then to be left to settle for six to twelve hours, and filtered. It is to be taken three times a day in doses of a small glassful, or in half that quantity at a time with fresh water or milk. It is stated as a fact that sea-water thus used facilitates the oxygenation of the blood, and that it hastens the elimination of effete materials. In combination with this treatment sea-water baths are to be taken, free exercise is to be carried out, and at the same time fattening foods are to be avoided. Cases which have resisted other measures are stated to yield to this treatment.

— Drs. Humphreys and Fenner, of Seguin, Texas, report to the *American Supplement of The Obstetrical Journal of Great Britain and Ireland* for May, 1876, a case of a complete septum of the vagina. The patient, a German lady aged nineteen, stout and plump, was taken in labor January 11th. They saw her four days afterwards, and learned that she had been in labor all that time under an old lady's care. She was greatly fatigued, but not exhausted. The head rested above the brim, was in good position, occiput to left, and was freely movable. The os tincae, dilated to about half the full size, covered the right parietal bone. They changed her position, and presently found the os covering the left parietal, and it was some little time before they noticed that there were two vaginas and two mouths to the womb, with the head resting centrally and heavily against the septum.

The two passages were exactly similar in every respect, and it was clearly impossible to deliver the child through either. Neither the forceps, version, nor craniotomy was available, and the Cæsarean section could hardly be justified where the child showed no sign of being alive. They decided to cut the septum, although they could recollect no authority or precedent for it. The head was pushed back, two fingers passed between it and the septum, a curved, probe-pointed bistoury, carefully guarded, was used, and the septum divided about an inch. A few pains brought the head against the septum, when an-

other inch was cut, and so on until the septum was cut through and the child expelled by the natural efforts. The hæmorrhage from the cut was only an ounce or two, and the woman recovered promptly and without a bad symptom. The child, apparently dead, was revived after long efforts.

The septum was placed antero-posteriorly, commencing at the arch of the pubis, passing down to the fourchette with a free edge, flush with the labia minora, and attached to the perinæum, the walls of the vagina, and the lips of the os uteri, holding the latter nearly in contact. It was about $1\frac{3}{4}$ inches wide. Its free border in front was almost a feather edge. Higher up it was of uniform thickness, of about $1\frac{1}{2}$ lines in the centre, growing thicker each way to its junction with the vaginal walls. Under the knife it had a fibrous feel, as if composed of sewing-threads. The part between the lips of the uterus was spread out a half-inch wide, either naturally or by the long-continued pressure of the head.

— An association to be known as the American Gynæcological Society was organized in New York on June 3d by the following gentlemen: F. Barker, T. G. Thomas, J. M. Sims, E. R. Peaslee, T. A. Emmett, E. Noeggerath, J. E. Taylor, W. T. Lusk, P. F. Munde, of New York; J. Byrne, A. J. C., Skene, of Brooklyn; W. L. Atlee, W. Goodell, R. A. F. Penrose, E. Wallace, A. H. Smith, T. M. Drysdale, J. V. Ingham, of Philadelphia; C. E. Buckingham, A. D. Sinclair, G. H. Lyman, W. L. Richardson, G. H. Bixby, J. R. Chadwick, of Boston; H. P. O. Wilson, W. T. Howard, of Baltimore; T. Parvin, of Indianapolis; E. W. Jenks, of Detroit; R. Battey, of Rome, Ga.; W. H. Byford, of Chicago; G. J. Engelmann, of St. Louis; S. C. Busey, Taber Johnson, of Washington; E. Van de Warker, of Syracuse; J. P. White, of Buffalo; J. M. Trask, of Astoria; J. C. Reeve, of Dayton, Ohio; H. F. Campbell, of Augusta, Ga.

The officers for the first year are as follows: President, Fordyce Barker; vice-presidents, W. L. Atlee, W. H. Byford; secretary, J. R. Chadwick; treasurer, P. F. Munde; council, J. M. Sims, W. Goodell, T. Parvin, G. H. Lyman. The first meeting will be held in New York on September 13, 1876.

— The condition of medical education in Maine is very flourishing. A large and uncommonly good class has recently graduated at Bowdoin, and the Portland School of Instruction has opened with an increased number of pupils. An examination for admission will hereafter be required. The Maine Medical Society met on June 27th and 28th. We hope to give some account of the meeting.

— We take from the *New York Medical Record* the following account of the murder of the superintendent of an insane asylum: "Dr. George Cook, the medical superintendent of Brigham Hall, Canandaigua, was fatally stabbed in the neck by an insane patient on the morning of June 12th, dying the same evening. The patient was a farmer by the name of Benson, who had been but recently admitted, and was not considered dangerous. He seemed to have been impressed with the idea that people were trying to poison him, and that Dr. Cook was endeavoring to administer the poison. Yesterday morning the doctor, in making his usual rounds among his patients, met Benson in his room or in one of the halls. Benson immediately struck the doctor in the

face and neck with a knife. Help was soon at hand and physicians summoned, and strong hopes were entertained for a time that the wounds would not prove fatal. All that medical and surgical skill could devise was brought to bear in the case, but failed, and the doctor died about five P. M. His age was about fifty years. Benson had evidently prepared the knife for the attack on the doctor, as it was found to have been recently sharpened, and he had wound cloth or paper around the handle, so that he could retain a firm hold of the instrument of death."

— We have received a copy of resolutions adopted by a committee of the Abingdon Academy of Medicine on the death of Dr. John P. Mettauer, whose name will be familiar to our oldest subscribers as a contributor to the JOURNAL.

Dr. John P. Mettauer died at his residence at Worsham (the old court house of Prince Edward County), Va., November 22, 1875, in the eighty-eighth year of his age. He entered upon the practice of his profession when about twenty-one years of age, and continued constantly at his post until, a few days before his death, he was seized by the fatal attack of disease, all the while enjoying a large and lucrative practice. During his long life of active labor he won for himself at home and abroad an enviable reputation. By careful study he was enabled to keep pace with the advances of science, with the latest changes in which he was thoroughly familiar. He was highly respected by his professional colleagues, as the accompanying resolutions will show:—

Resolved, That in the death of Dr. John P. Mettauer the medical faculty has lost one of its most distinguished men, the country in which he resided an able and safe practitioner, and the State one of its brightest ornaments in medical science, and his family the honored and revered head.

Resolved, That the Abingdon Academy of Medicine will ever entertain the most profound respect for the memory of Dr. Mettauer, for his high moral and medical character, his great ability as a practitioner and writer, and for his many virtues.

Resolved, That a copy of the preamble and resolutions be sent to the family of Dr. Mettauer, and also to the editors of the *Virginia Medical Monthly*, *Southern Medical Record*, and *Boston Medical and Surgical Journal*.

W. F. BARR,

F. D. KERNAN,

J. S. APPERSON, *Committee*.

LETTER FROM BALTIMORE.

BALTIMORE is situated on the river Patapsco, and at the same time is washed by the waters of the Chesapeake Bay, which, reaching Locust Point (where a narrower passage is formed by the proximity of the opposite shore, Canton), makes a large sweep, extending right up into the heart of the business portion of the city. This is called "the basin," and although filled with steam and sail craft of all sizes and descriptions is shallow, dirty, filthy, muddy, stinking, a bane and an eye-sore to all. For years plans and suggestions, with contrivances of all kinds, from councilmen, merchants, doctors, scientists, have been proposed, some rejected, some tried; but still this horrible nuisance exists

and affords subject for discussion, but that is about all. Learned men say, Beware lest some terrible scourge like Asiatic cholera or yellow fever, once imported, be spread like wild-fire by the miasma arising from the basin, and devastate our city. Others equally learned reply, The basin is the safety-valve of public health, and we regard this water as the only means that would prevent the ravages of such deadly diseases, should they once obtain a foot-hold on our shores. As this point is more or less speculative, we will leave the savants to fight it out on that line or hold it sub cur(e)-ia.

One fact, however, is preëminent: the basin is a nuisance of the first water, and the foul, sickening stench on a hot day extends over the whole city, being more perceptible in the stillness of the night, when the air thus breathed is of a heavy, suffocative character. The plan of emptying large quantities of dead oil into the basin was adopted and carried out by the board of health last year, and answered the double purpose of destroying the stench and quantities of alewives, as well as other fish, whose dead bodies could be seen floating on the dark surface of the water. The experiment, for such the board of health in their report issued in October, 1875, affirm it to have been, was a success so far as destroying the stench was concerned, as was testified to by thousands who had suffered from it before. Our worthy and esteemed health commissioner, Dr. James A. Stewart, was authorized by the mayor to expend the amount suggested, \$1000, in abating the trouble, dead oil having been decided upon as cheapest and best after experimenting with all reputable disinfectants at command. The purchase was made at once of four hundred barrels at \$2 per barrel, and arrangements effected to empty the dead oil where the odor was most offensive. The amount expended for hire of scows, labor, etc., amounted to about \$50. This added to \$150 paid for chemical analysis, experiments, etc., makes a total of \$1000. This was done in early summer last year; the influence of the dead oil continued throughout the season, modifying, if not entirely destroying the foul odor to such an extent that little or no complaint had been heard from any quarter since that period up to the date of publishing the report, which goes on to state that all this could only be regarded as a justifiable temporary expedient, and should not deter the city council from taking such measures as will, through proper engineering skill, permanently rectify this crying evil.

The plan of directing the course of Gunpowder River through to the basin and thus creating a current, supposing the cause of the evil to be stagnation, is very good theoretically, but does not seem to be practicable, and at present but little is said about it. Silence also reigns supreme about dredging, and so we remain *in statu quo*, talking, writing, arguing, etc., and still the nuisance exists. As regards the causes, there are as many and as different opinions as there have been suggestions and articles about any other phase of what has been elegantly styled by the *Philadelphia Medical Times* as our "Cloacina."

At a recent meeting of the committee on the harbor a plan was brought before them, looking toward an improvement in the present condition of the harbor and especially the basin. Prof. Wm. E. A. Aiken was on invitation present at this meeting of the committee, and laid before them the plan just alluded to, which in his own mind would, if adopted, secure the desired re-

sult of removing the noxious odor and vapors which are continually arising from foul matter in the basin. Professor Aiken gave it as his opinion that the refuse matter flowing from the sugar refineries (of which there are several whose drainage empties into the basin) was to a great extent the cause of all this foulness, and that the stagnant condition of the water must be modified in some way before the desired end could be attained. To remedy this he proposes creating a continual flow of pure water through the basin, by which means the decomposed animal and vegetable substances could be carried out in the river below. This continual flow of water he proposes to obtain from the Patapsco River by constructing a dike at Long Bridge, and in connection with the dike a lock in the manner of a canal lock, which will keep in head a constant supply of water, and at the same time will not cut off river navigation.

From this dike the plan is to lay four or five thirty-inch pipes through which the water is to pass continually, thus creating the current desired. By this means the water flowing from the head of the basin out into the harbor and river below will carry with it all the filth of the basin and render the water pure and the bottom clear. With this current, in the professor's opinion, all surface drainage might be allowed to flow freely into the basin and would be carried off like other matter. Surface drainage is, he believes, far more healthy than underground drainage, and should be continued through the city if possible.

Professor William P. Towry, the chemist at the Maryland Institute, then came before the committee and presented to them his views upon the subject. Professor Towry thought that fully one half the foul matter of the basin came from the drainage of the sugar refineries; on this point, it will be seen, both gentlemen agree. This one cause alone Towry considers sufficient to create the miasmatic vapors and gases which aid in discoloring the bottoms of vessels and are so intolerable at all seasons of the year. The other half of the filth is attributed by the professor to the refuse from sewerage and surface drainage. The organic and acid elements in this refuse unite and generate sulphureted hydrogen, which is the gas so offensive to the nostrils of our citizens. This chemical process goes on at the bottom of the basin, and it is Professor Towry's belief that the current of pure water to be created by Professor Aiken's plan would not be sufficient to carry off the refuse at the bottom and destroy the smell. Professor Towry further said that the only practicable method to remove this offense would be to construct a general receptacle for all sewerage, and by this means to carry it out into the river, shutting off all organic matter from the basin.

The opinions of both professors were listened to with great interest by the committee, who are doing all in their power to discover some plan by which the basin nuisance can be abated. They will not be ready to report to the city council for some weeks.

G. H. B.

BALTIMORE, May 29, 1876.

ERRATUM. — On page 675, eighth line from foot of paper, instead of Foster Hawkins read J. Foster Jenkins.

BOOKS AND PAMPHLETS RECEIVED. — Micro-Photographs in Histology, Normal and Pathological. By Carl Seiler, M. D., in conjunction with J. Gibbons Hunt, M. D., and Joseph G. Richardson, M. D. Philadelphia: J. H. Coates & Co. 1876. Nos. 1 and 2.
Annual Report of St. Mary's Hospital, Quincy, Ill.

International Exhibition of 1876. Hospital Medical Department, United States Army. Pamphlets 1 to 6. (From Surgeon-General's Office.)

THE following is the list of graduates from the Harvard Medical School at the annual commencement, June 28, 1876, with the titles of their theses: —

Fletcher Morton Abbot. Wrist and Foot Tourniquet, invented, made, and described by the writer.

Read Letts Bell, A. M. Pessaries.

William Appleton Bell, A. B. Urinary Calculi.

Frederick Pfeiffer Biggs, M. D. Ventilation.

Edward Young Bogman, A. B. Torsion of Arteries.

Seranus Bowen. Psoriasis.

Charles William Brown. Salicylic Acid in Rheumatism.

Gonzalo Edward Buxton, M. D. The Powerful Influence of Mental Impressions in Remedies.

Arthur Tracy Cabot, A. B. Erysipelas.¹

George Peters Caldwell. Caries Tarsi.

William Reginald Chipman, A. B. Typhoid Fever.

Frederick Herbert Copeland, A. B. Curara.

Charles Kimball Cutter, A. B. Leucocythæmia.

William Henry Dale. Chronic Bright's Disease.

William McKay Deinstadt. Uterine Hæmorrhage.

William John Gordon Fogg, A. B. Scarletina.

George Townsend Fox, A. B. Cerebral Hæmorrhage and Apoplexy.

Thomas Waterman Huntington, A. B. Gangrene of the Lungs.

William Leavitt Jackson. Typhoid Fever.

John Henry Kennealy. Hysteria.

Alexander Livingston. Epilepsy, Pathology and Treatment.

Enoch Quimby Marston. Gastric Cancer.

Manuel Masfonoll. Inherited Syphilis.

Cornelius Joseph McCormick. Morbus Coxæ.

Eugene John McGrath. Intestinal Obstruction.

Beverly McMonagle. Acute Dysentery.

Charles John Miller. Sedation and Excitation of Nervous System by Therapeutic Agents.

Frederick Fiske Moore. The Treatment of Acute Rheumatism by Salicylic Acid.

Arthur Bennett Morong. Prevention of Scarletina.

John David O'Connell. Diphtheria.

George Ellis Putney. Valvular Endocarditis.

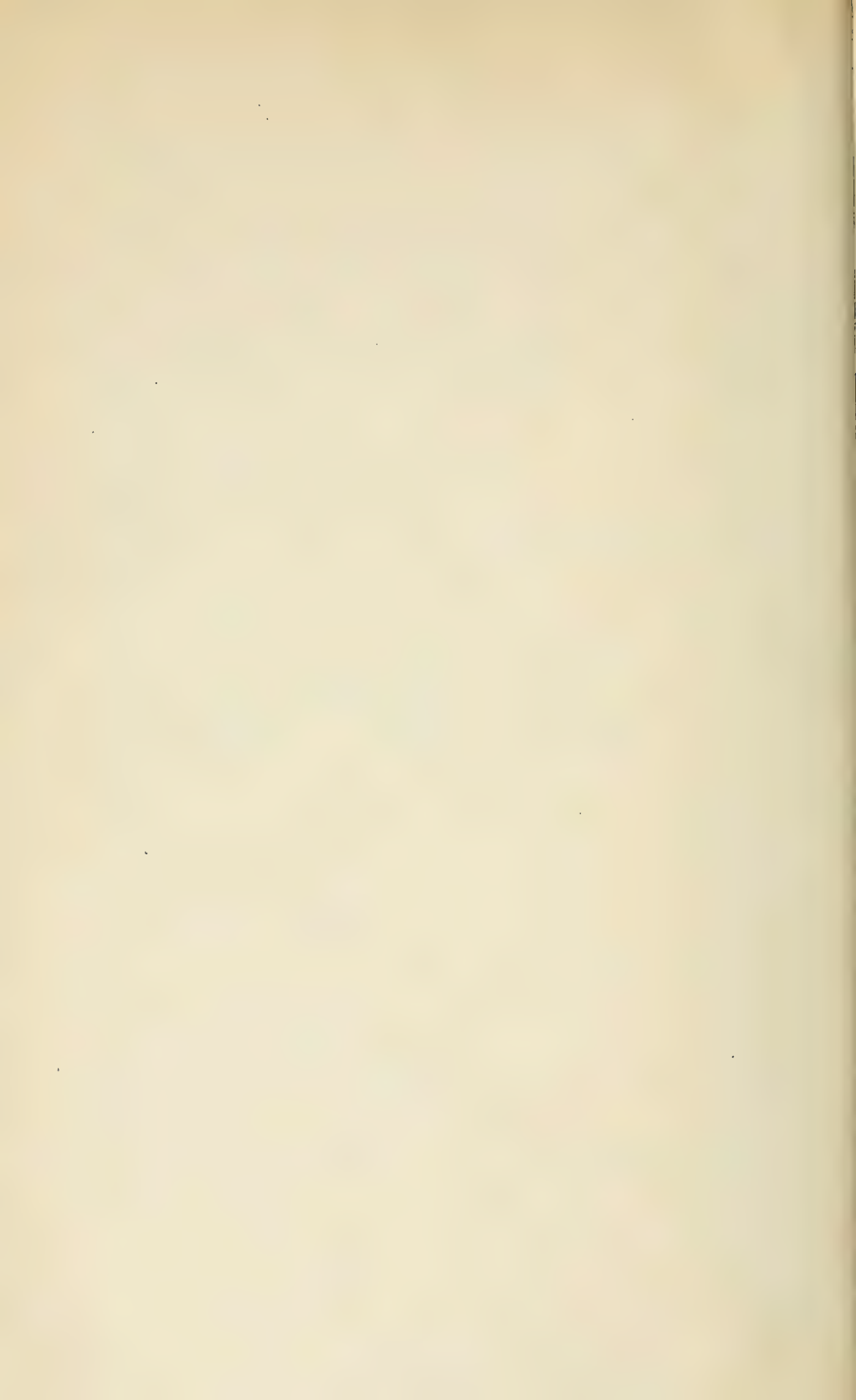
Samuel Quincy Robinson, B. S. Guinea Worm.

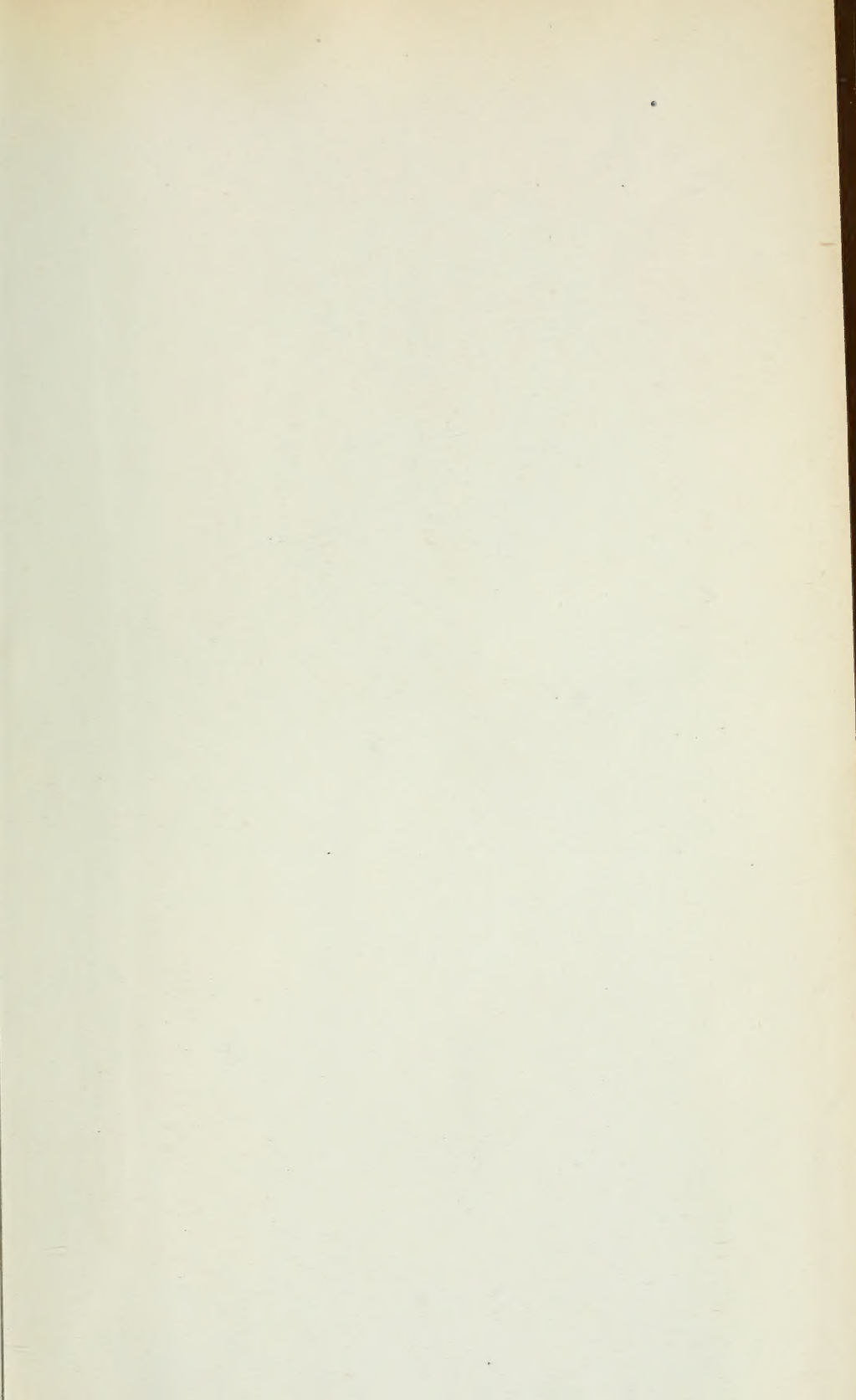
Frank Elmer Tilden. Ætiology and History of Diphtheria.

George Horton Tilden, A. B. Cottage Hospitals.

William Adams Winn, A. B. Excision of Elbow-Joint.

¹ For its acknowledged merit, mentioned by title in the programme of the Commencement exercises.





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